COTATI VILLAGE #2
AIR QUALITY & GREENHOUSE GAS ASSESSMENT

Cotati, California

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Introduction

The purpose of this report is to address air quality, health risk, and greenhouse gas (GHG) impacts associated with the proposed Cotati Village #2 project located at 7515 Alder Avenue in Cotati, California. Air quality and GHG would be associated with the construction of new buildings and infrastructure, and operation of the project. Air pollutants and GHG emissions associated with construction and operation of the project were predicted using appropriate computer models. In addition, the potential project health risk impacts (construction and operation) and the impact of existing toxic air contaminant (TAC) sources affecting the nearby and proposed sensitive receptors were evaluated. The analysis was conducted following guidance provided by the Bay Area Air Quality Management District (BAAQMD).[1]

Project Description

The approximately 4-acre project site is located on a vacant parcel. The project proposes to construct two, four-story buildings totaling 126 residential units and a separate 2,250 square-foot (sf) café. It would also include 168 parking spaces throughout the site.

Setting

The project is located in the portion of Sonoma County that is part of the San Francisco Bay Area Air Basin. Ambient air quality standards have been established at both the State and federal level. The Bay Area meets all ambient air quality standards with the exception of ground-level ozone, respirable particulate matter (PM_{10}) and fine particulate matter ($PM_{2.5}$). In Sonoma County, measured levels of air pollutants are below air quality standards, including ozone, PM_{10} and $PM_{2.5}$.

Air Pollutants of Concern

High ozone concentrations in the air basin are caused by the cumulative emissions of reactive organic gases (ROG) and nitrogen oxides (NO_X). These precursor pollutants react under certain meteorological conditions to form ozone concentrations. Controlling the emissions of these precursor pollutants is the focus of the Bay Area's attempts to reduce ambient ozone concentrations. The highest ozone concentrations in the Bay Area occur in the eastern and southern inland valleys that are downwind of air pollutant sources. High ozone concentrations aggravate respiratory and cardiovascular diseases, reduced lung function, and increase coughing and chest discomfort.

Particulate matter is another problematic air pollutant in the air basin. Particulate matter is assessed and measured in terms of respirable particulate matter or particles that have a diameter of 10 micrometers or less (PM_{10}) and fine particulate matter where particles have a diameter of 2.5 micrometers or less ($PM_{2.5}$). Elevated concentrations of PM_{10} and $PM_{2.5}$ are the result of both region-wide (or cumulative) emissions and localized emissions. High particulate matter concentrations aggravate respiratory and cardiovascular diseases, reduce lung function, increase mortality (e.g., lung cancer), and result in reduced lung function growth in children.

[1] Bay Area Air Quality Management District, *2022 CEQA Guidelines*, April 2023.

Toxic Air Contaminants

TACs are a broad class of compounds known to cause morbidity or mortality, often because they cause cancer. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter [DPM] near a freeway). Because chronic exposure of TACs can result in adverse health effects, they are regulated at the regional, State, and federal level.

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about three-quarters of the cancer risk from TACs (based on the Bay Area average). According to the California Air Resources Board (CARB), diesel exhaust is a complex mixture of gases, vapors, and fine particles. This complexity makes the evaluation of health effects from diesel exhaust exposure a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB, and are listed as carcinogens either under the State's Proposition 65 or under the Federal Hazardous Air Pollutants programs. Health risks from TACs are estimated using the Office of Environmental Health Hazard Assessment (OEHHA) risk assessment guidelines, which were published in February of 2015 and incorporated in BAAQMD's current CEQA guidance.[2]

Sensitive Receptors

There are groups of people more affected by air pollution than others. CARB has identified the following persons who are most likely to be affected by air pollution: children under 16, the elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, elementary schools, and parks. For cancer risk assessments, children are the most sensitive receptors, since they are more susceptible to cancer causing TACs. Residential locations are assumed to include infants and small children. The closest sensitive receptors to the site are the residents in the townhomes northeast of the project site, with additional single-family homes in the surrounding area. If the Cotati Village #1 project adjacent to the east of the site is completed before this project begins, it would also have sensitive receptors. The project will introduce new sensitive (i.e., residential) receptors.

Regulatory Setting

Federal Regulations

The United States Environmental Protection Agency (EPA) sets nationwide emission standards for mobile sources, which include on-road (highway) motor vehicles such trucks, buses, and automobiles, and non-road (off-road) vehicles and equipment used in construction, agricultural, industrial, and mining activities (such as bulldozers and loaders). The EPA also sets nationwide

[2] OEHHA, 2015. *Air Toxics Hot Spots Program Risk Assessment Guidelines, The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*. Office of Environmental Health Hazard Assessment. February.

fuel standards. California also has the ability to set motor vehicle emission standards and standards for fuel used in California, as long as they are the same or more stringent than the federal standards.

In the past decade the EPA has established a number of emission standards for on- and non-road heavy-duty diesel engines used in trucks and other equipment. This was done in part because diesel engines are a significant source of NO_X and particulate matter (PM_{10} and $PM_{2.5}$) and because the EPA has identified DPM as a probable carcinogen. Implementation of the heavy-duty diesel on-road vehicle standards and the non-road diesel engine standards are estimated to reduce particulate matter and NO_X emissions from diesel engines up to 95 percent in 2030 when the heavy-duty vehicle fleet is completely replaced with newer heavy-duty vehicles that comply with these emission standards.[3]

In concert with the diesel engine emission standards, the EPA has also substantially reduced the amount of sulfur allowed in diesel fuels. The sulfur contained in diesel fuel is a significant contributor to the formation of particulate matter in diesel-fueled engine exhaust. The new standards reduced the amount of sulfur allowed by 97 percent for highway diesel fuel (from 500 parts per million by weight [ppmw] to 15 ppmw), and by 99 percent for off-highway diesel fuel (from about 3,000 ppmw to 15 ppmw). The low sulfur highway fuel (15 ppmw sulfur), also called ultra-low sulfur diesel (ULSD), is currently required for use by all vehicles in the U.S.

All of the above federal diesel engine and diesel fuel requirements have been adopted by California, in some cases with modifications making the requirements more stringent or the implementation dates sooner.

State Regulations

To address the issue of diesel emissions in the state, CARB developed the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles.[4] In addition to requiring more stringent emission standards for new on-road and off-road mobile sources and stationary diesel-fueled engines to reduce particulate matter emissions by 90 percent, a significant component of the plan involves application of emission control strategies to existing diesel vehicles and equipment. Many of the measures of the Diesel Risk Reduction Plan have been approved and adopted, including the federal on-road and non-road diesel engine emission standards for new engines, as well as adoption of regulations for low sulfur fuel in California.

CARB has adopted and implemented a number of regulations for stationary and mobile sources to reduce emissions of DPM. Several of these regulatory programs affect medium and heavy-duty diesel trucks that represent the bulk of DPM emissions from California highways. CARB regulations require on-road diesel trucks to be retrofitted with particulate matter controls or replaced to meet 2010 or later engine standards that have much lower DPM and $PM_{2.5}$ emissions. This regulation will substantially reduce these emissions between 2013 and 2023. While new trucks and buses will meet strict federal standards, this measure is intended to accelerate the rate

[3] USEPA, 2000. *Regulatory Announcement, Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements*. EPA420-F-00-057. December.
[4] California Air Resources Board, 2000. Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles. October.

at which the fleet either turns over so there are more cleaner vehicles on the road or is retrofitted to meet similar standards. With this regulation, older, more polluting trucks would be removed from the roads sooner.

CARB has also adopted and implemented regulations to reduce DPM and NO_X emissions from in-use (existing) and new off-road heavy-duty diesel vehicles (e.g., loaders, tractors, bulldozers, backhoes, off-highway trucks, etc.). The regulations apply to diesel-powered off-road vehicles with engines 25 horsepower (hp) or greater. The regulations are intended to reduce particulate matter and NO_X exhaust emissions by requiring owners to turn over their fleet (replace older equipment with newer equipment) or retrofit existing equipment in order to achieve specified fleet-averaged emission rates. Implementation of this regulation, in conjunction with stringent federal off-road equipment engine emission limits for new vehicles, will significantly reduce emissions of DPM and NO_X.

Bay Area Air Quality Management District (BAAQMD)

BAAQMD has jurisdiction over an approximately 5,600-square mile area, commonly referred to as the San Francisco Bay Area (Bay Area). The District's boundary encompasses the nine San Francisco Bay Area counties, including Alameda County, Contra Costa County, Marin County, San Francisco County, San Mateo County, Santa Clara County, Napa County, southwestern Solano County, and southern Sonoma County.

BAAQMD is the lead agency in developing plans to address attainment and maintenance of the National Ambient Air Quality Standards and California Ambient Air Quality Standards. The District also has permit authority over most types of stationary equipment utilized for projects. The BAAQMD is responsible for permitting and inspection of stationary sources; enforcement of regulations, including setting fees, levying fines, and enforcement actions; and ensuring that public nuisances are minimized.

BAAQMD's Community Air Risk Evaluation (CARE) program was initiated in 2004 to evaluate and reduce health risks associated with exposures to outdoor TACs in the Bay Area.[5] The program examines TAC emissions from point sources, area sources, and on-road and off-road mobile sources with an emphasis on diesel exhaust, which is a major contributor to airborne health risk in California. The CARE program is an on-going program that encourages community involvement and input. The technical analysis portion of the CARE program has been implemented in three phases that includes an assessment of the sources of TAC emissions, modeling and measurement programs to estimate concentrations of TAC, and an assessment of exposures and health risks. Throughout the program, information derived from the technical analyses has been used to develop emission reduction activities in areas with high TAC exposures and high density of sensitive populations. Risk reduction activities associated with the CARE program are focused on the most at-risk communities in the Bay Area. Seven areas have been identified by BAAQMD as impacted communities. They include Eastern San Francisco, Richmond/San Pablo, Western Alameda, San José, Vallejo, Concord, and Pittsburgh/Antioch. The project site is not within any of the BAAQMD CARE areas.

[5] See BAAQMD: https://www.baaqmd.gov/community-health/community-health-protection-program/community-air-risk-evaluation-care-program.

Overburdened communities are areas located (i) within a census tract identified by the California Communities Environmental Health Screening Tool (CalEnviroScreen), Version 4.0 implemented by OEHHA, as having an overall score at or above the 70th percentile, or (ii) within 1,000 feet of any such census tract.[6] The BAAQMD has identified several overburdened areas within its boundaries. However, the project site is not within an overburdened area as the Project site is scored at the 38th percentile on CalEnviroScreen.[7]

BAAQMD CEQA Air Quality Guidelines

In June 2010, BAAQMD adopted thresholds of significance to assist in the review of projects under CEQA. In 2023, the BAAQMD revised the *California Environmental Quality Act* (*CEQA) Air Quality Guidelines* that include significance thresholds to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The current BAAQMD guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process consistent with CEQA requirements including thresholds of significance, mitigation measures, and background air quality information. They include assessment methodologies for criteria air pollutants, air toxics, odors, and GHG emissions as shown in Table 1.[8] Air quality impacts and health risks are considered potentially significant if they exceed these thresholds.

The BAAQMD recommends all projects include a "basic" set of best management practices (BMPs) to manage fugitive dust and consider impacts from dust (i.e., fugitive PM_{10} and $PM_{2.5}$) to be less than significant if BMPs are implemented (listed below). BAAQMD strongly encourages enhanced BMPs for construction sites near schools, residential areas, other sensitive land uses, or if air quality impacts were found to be significant.

[6] See BAAQMD: https://www.baaqmd.gov/~/media/dotgov/files/rules/reg-2-permits/2021-amendments/documents/20210722_01_appendixd_mapsofoverburdenedcommunities-pdf.pdf?la=en.
[7] OEHAA, CalEnviroScreen 4.0 Maps https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40
[8] Bay Area Air Quality Management District, *2022 CEQA Guidelines.* April2023.

Table 1. BAAQMD CEQA Significance Thresholds

Criteria Air Pollutant	Construction Thresholds		Operational Thresholds	
	Average Daily Emissions (lbs./day)		Average Daily Emissions (lbs./day)	Annual Average Emissions (tons/year)
ROG	54		54	10
NO_X	54		54	10
PM_{10}	82 (Exhaust)		82	15
$PM_{2.5}$	54 (Exhaust)		54	10
CO	Not Applicable		9.0 ppm (8-hour average) or 20.0 ppm (1-hour average)	
Fugitive Dust	Construction Dust Ordinance or other Best Management Practices (BMPs)*		Not Applicable	
Health Risks and Hazards	**Single Sources/ Individual Project**		**Combined Sources (Cumulative from all sources within 1000-foot zone of influence)**	
Excess Cancer Risk	>10 in a million	OR Compliance with Qualified Community Risk Reduction Plan	>100 in a million	OR Compliance with Qualified Community Risk Reduction Plan
Hazard Index	>1.0		>10.0	
Incremental annual $PM_{2.5}$	>0.3 µg/m^3		>0.8 µg/m^3	
Greenhouse Gas Emissions				
Land Use Projects – (Must Include A or B)	A. Projects must include, at a minimum, the following project design elements: 1. Buildings a. The project will not include natural gas appliances or natural gas plumbing (in both residential and nonresidential development). b. The project will not result in any wasteful, inefficient, or unnecessary energy usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines. 2. Transportation a. Achieve a reduction in project-generated vehicle miles traveled (VMT) below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent) or meet a locally adopted Senate Bill 743 VMT target, reflecting the recommendations provided in the Governor's Office of Planning and Research's Technical Advisory on Evaluating Transportation Impacts in CEQA: i. Residential projects: 15 percent below the existing VMT per capita ii. Office projects: 15 percent below the existing VMT per employee iii. Retail projects: no net increase in existing VMT b. Achieve compliance with off-street electric vehicle requirements in the most recently adopted version of CALGreen Tier 2. B. Be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b).			

Note: ROG = reactive organic gases, NO_X = nitrogen oxides, PM_{10} = course particulate matter or particulates with an aerodynamic diameter of 10 micrometers (µm) or less, $PM_{2.5}$ = fine particulate matter or particulates with an aerodynamic diameter of 2.5µm or less. GHG = greenhouse gases.

* BAAQMD strongly recommends implementing all feasible fugitive dust management practices especially when construction projects are located near sensitive communities, including schools, residential areas, or other sensitive land uses.

Source: Bay Area Air Quality Management District, 2022

City of Cotati 2013 General Plan

The 2013 Cotati General Plan Conservation Element includes an extensive list of policies and action measures that are aimed at improving air quality. Additionally, the General Plan Land Use Element and Land Use Map promotes a compact urban development pattern that emphasizes infill development and ensures that land use patterns do to not expose sensitive receptors to unhealthy pollutant concentrations. Furthermore, the Circulation Element includes a range of policies and action items that would effectively reduce vehicle travel, through the use of complete streets and multi-modal transportation systems. Applicable General Plan policies include:

- **Policy CON 2.1**: Improve air quality through continuing to require a compact development pattern that focuses growth in and around existing urbanized areas, locating new housing near places of employment, encouraging alternative modes of transportation, and requiring projects to mitigate significant air quality impacts.
- **Policy CON 2.2**: Minimize exposure of sensitive receptors to concentrations of air pollutant emissions and toxic air contaminants.
- **Policy CON 2.4**: Require new development or significant remodels to install fireplaces, stoves, and/or heaters which meet current BAAQMD standards.
- **Policy CON 2.5**: Continue to require all construction projects and ground disturbing activities to implement BAAQMD dust control and abatement measures.
- **Policy CON 2.7**: Continue to aggressively implement the greenhouse gas (GHG) reduction measures contained in the 2008 Cotati Greenhouse Gas Emissions Reduction Action Plan.
- **Policy CON 3.1**: Continue to require all new public and privately constructed buildings to meet and comply with CALGreen Tier 1 standards.
- **Policy CON 3.2**: Support innovative and green building best management practices, including LEED certification, for all new development, and encourage project applicants to exceed CALGreen Tier 1 standards, if feasible.
- **Policy CON 3.3**: Promote the use of alternative energy sources in new development.
- **Policy CON 3.7**: Encourage tree planting, including widespread use of trees as windbreaks to maximize the effects of cooling westerly winds and planting of deciduous trees to help reduce summer temperatures, either in conjunction with new development or through private sector participation.
- **Policy CON 3.8**: Promote water conservation among water users.
- **Policy CON 3.9**: Require the use of drought-tolerant and regionally native plants in landscaping.
- **Policy CON 3.10**: Ensure that the layout and design of new development and significant remodels encourages the use of transportation modes other than automobiles and trucks.
- **Policy CON 3.16**: Improve and maintain landscaping around commercial areas in order to minimize the "heat island" effect, provide shade, soften the harshness of such commercial areas, and create a more leisurely ambience.

AIR QUALITY IMPACTS

Impact AIR-1: Conflict with or obstruct implementation of the applicable air quality plan?

BAAQMD, with assistance from the Association of Bay Area Governments (ABAG) and Metropolitan Transportation Commission (MTC), implements specific plans to meet the applicable federal and State laws, regulations, and programs. The most recent and comprehensive plan is the *Bay Area 2017 Clean Air Plan*.[9] The primary goals of the Clean Air Plan are to attain air quality standards, reduce population exposure and protect public health, and reduce GHG emissions and protect the climate. The BAAQMD has also recently updated its CEQA guidelines to assist lead agencies in evaluating the significance of air quality impacts. In formulating compliance strategies, BAAQMD relies on planned land uses established by local general plans. Land use planning affects vehicle travel, which in turn affects region-wide emissions of air pollutants and GHGs.

The 2017 Clean Air Plan, adopted by BAAQMD in April 2017, includes control measures that are intended to reduce air pollutant emissions in the Bay Area either directly or indirectly. Plans must show consistency with the control measures listed within the Clean Air Plan. At the project-level, there are no consistency measures or thresholds. The proposed project would not conflict with the latest Clean Air planning efforts since 1) project would have construction and operational emissions below the BAAQMD thresholds and 2) the project would be considered urban infill, and 3) the project would be located near employment centers.

Impact AIR-2: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

The Bay Area is considered a non-attainment area for ground-level O_3 and $PM_{2.5}$ under both the NAAQS and the CAAQS. The area is also considered non-attainment for PM_{10} under the CAAQS, but not the NAAQS. The area has attained both the NAAQS and CAAQS for carbon monoxide (CO). As part of an effort to attain and maintain the NAAQS and CAAQS for O_3, $PM_{2.5}$ and PM_{10}, the BAAQMD has established thresholds of significance for these air pollutants and their precursors. These thresholds are for O_3 precursor pollutants (ROG and NO_X), PM_{10}, and $PM_{2.5}$ and apply to both construction period and operational period impacts.

Construction Period Emissions

The California Emissions Estimator Model (CalEEMod) Version 2022 was used to estimate emissions from on-site construction activity, construction vehicle trips, and evaporative emissions. The project land use types and size, and anticipated construction schedule were input to CalEEMod. The CalEEMod model output along with construction inputs are included in *Attachment 1*.

[9] Bay Area Air Quality Management District (BAAQMD), 2017. *Final 2017 Clean Air Plan.*

CalEEMod Inputs

Land Uses

The proposed project land uses were entered into CalEEMod as described in Table 2.

Table 2. Summary of Project Land Use Inputs

Project Land Uses	Size	Units	Square Feet	Acreage
Apartments Mid Rise	126	Dwelling Units	141,680	4
Fast Food Restaurant w/o Drive Thru	2.25	1,000-sf	2,250	
Parking Lot	168	Parking Spaces	-	

Construction Inputs

CalEEMod computes annual emissions for construction that are based on the project type, size, and acreage. The model provides emission estimates for both on-site and off-site construction activities. On-site activities are primarily made up of construction equipment emissions, while off-site activity includes worker, hauling, and vendor traffic. The construction build-out scenario, including equipment quantities, average hours per day, total number of workdays, and schedule, were based on a blend of CalEEMod defaults and information provided by the project applicant (included in *Attachment 1)*. The construction schedules assumed that the earliest possible start date would be January 2025 and the project would be built out over a period of approximately 10 months or 216 construction workdays. The earliest full year of project operation was assumed to be 2026.

Construction Traffic Emissions

Construction would produce traffic in the form of worker trips and truck traffic. The traffic-related emissions are based on worker and vendor trip estimates produced by CalEEMod and haul trips that were computed based on the amount of estimated demolition material to be exported, soil imported and/or exported to the site, and amount of concrete truck trips to and from the site. CalEEMod provides daily estimates of worker and vendor trips for each applicable phase. Haul trips for demolition and grading were estimated by CalEEMod using the provided demolition soil import/export volumes. The number of total concrete haul trips was provided for the project and converted to daily one-way trips, assuming two trips per delivery. These values are shown in the project construction equipment worksheets included in *Attachment 1*.

Summary of Computed Construction Period Emissions

Average daily emissions were annualized for each year of construction by dividing the annual construction emissions by the number of active workdays during that year. Table 3 shows the uncontrolled annualized average daily construction emissions of ROG, NO_X, PM_{10} exhaust, and $PM_{2.5}$ exhaust during construction of the project. As indicated in Table 3, predicted uncontrolled annualized project construction emissions would not exceed the BAAQMD significance thresholds during any year of construction.

Table 3. Construction Period Emissions

Year	ROG	NOx	PM_{10} Exhaust	$PM_{2.5}$ Exhaust
Construction Emissions Per Year (Tons)				
2025	1.13	0.93	0.04	0.03
Average Daily Construction Emissions Per Year (pounds/day)				
2025 (216 construction workdays)	10.43	8.57	0.34	0.31
BAAQMD Thresholds (pounds per day)	*54* lbs./day	*54* lbs./day	*82* lbs./day	*54* lbs./day
Exceed Threshold?	No	No	No	No

Construction activities, particularly during site preparation and grading, would temporarily generate fugitive dust in the form of PM_{10} and $PM_{2.5}$. Sources of fugitive dust include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site deposit mud on local streets, which is an additional source of airborne dust after it dries. The BAAQMD recommends all projects include a "basic" set of best management practices (BMPs) to manage fugitive dust and considers impacts from dust (i.e., fugitive PM_{10} and $PM_{2.5}$) to be less-than-significant if BMPs are implemented.

General Plan *Policy CON 2.5* requires projects to implement BAAQMD dust control measures. Furthermore, the Project intends to implement a Construction Emissions Minimization Plan that includes measures that are consistent with the BAAQMD-recommended basic control measures for reducing fugitive particulate matter.

Operational Period Emissions

ROG, PM, and NO_X emissions from the project would be generated primarily from autos driven by future residents. Evaporative emissions from architectural coatings and maintenance products (classified as consumer products) are also typical ROG emission sources from these types of land uses. CalEEMod was used to estimate emissions from operation of the proposed project assuming full build-out.

CalEEMod Inputs

Land Uses

The project operational land uses were entered into CalEEMod as described above for the construction period modeling.

Model Year

Emissions associated with vehicle travel depend on the year of analysis because emission control technology requirements are phased-in over time. Therefore, the earlier the year analyzed in the model, the higher the emission rates utilized by CalEEMod. The earliest full year of operation would be 2026 if construction begins in 2025. Emissions associated with build-out later than 2026 would be lower.

Traffic Information

CalEEMod allows the user to enter specific vehicle trip generation rates. Therefore, the project-specific daily trip generation rate provided by the traffic consultant was entered into the model.[10] The project would produce approximately 1,773 daily trips. When accounting for the *Internal Capture* and *Diverted Link Reductions*, the project would then produce 1,180 new daily trips. The daily trip generation was calculated using ITE trip generation rates, the size of the project land uses, and the adjusted total automobile trips after reductions. The Saturday and Sunday trip rates were derived by multiplying the ratio of the CalEEMod default rates for Saturday and Sunday trips to the default weekday rate with the project-specific daily weekday trip rate. The default trip lengths and trip types specified by CalEEMod were used.

Energy

CalEEMod defaults for energy use were used, which include the 2019 Title 24 Building Standards. GHG emissions modeling includes those indirect emissions from electricity consumption. The CalEEMod default emission factor of 39.46 pounds of CO_2 per megawatt of electricity produced by Sonoma Clean Power was used.

The project will be all electric according to the project applicant. Therefore, natural gas for the residential and cafe land use was set to zero and the energy use associated with natural gas reassigned to electricity use in CalEEMod.

Wood-Burning Devices

CalEEMod default inputs assume new residential construction would include woodburning fireplaces and stoves. The project would not include wood-burning devices, as these devices are prohibited by BAAQMD Regulation 6, Rule 3.[11] Therefore, the number of woodstoves and woodburning fireplaces in CalEEMod were set to zero.

Other Inputs

Default model assumptions for emissions associated with solid waste generation use were used. Wastewater treatment was changed to 100 percent aerobic conditions to represent the use of city sewer services (i.e., project would not send wastewater to septic tanks or facultative lagoons).

Summary of Computed Operational Emissions

Annual emissions were predicted using CalEEMod and daily emissions were estimating assuming 365 days of operation. Table 4 shows uncontrolled net average daily operational emissions of ROG, NO_X, total PM_{10}, and total $PM_{2.5}$ during operation of the project. The uncontrolled operational period emissions would not exceed the BAAQMD significance thresholds.

[10] Email correspondence from Heather Gurewitz, M-Group., May 23, 2024. Attachment: *CV 2-trip generation summary.pdf*.
[11] Bay Area Air Quality Management District, https://www.baaqmd.gov/~/media/dotgov/files/rules/regulation-6-rule-3/documents/20191120_r0603_final-pdf.pdf?la=en

Table 4. Operational Period Emissions

Scenario	ROG	NOx	PM_{10}	$PM_{2.5}$
2026 Annual Project Operational Emissions (*tons/year*)	1.68	0.96	1.38	0.36
BAAQMD Thresholds (tons /year)	*10 tons*	*10 tons*	*15 tons*	*10 tons*
Exceed Threshold?	*No*	*No*	*No*	*No*
2026 Daily Project Operational Emissions (*pounds/day*)[1]	9.20	5.27	7.55	1.98
BAAQMD Thresholds (pounds/day)	*54* lbs.	*54* lbs.	*82* lbs.	*54* lbs.
Exceed Threshold?	*No*	*No*	*No*	*No*
Notes: [1]Assumes 365-day operation.				

Impact AIR-3: Expose sensitive receptors to substantial pollutant concentrations?

Project impacts related to increased health risk can occur by generating emissions of TACs and air pollutants. This project would introduce new sources of TACs during construction (e.g., on-site construction and truck hauling emissions) and operation (e.g., mobile sources). Project construction activity would generate dust and equipment exhaust that would affect nearby sensitive receptors. The project would not include stationary sources but would generate some traffic consisting of mostly light-duty gasoline-powered vehicles, which would produce TAC and air pollutant emissions.

Project impacts to existing sensitive receptors were addressed for temporary construction activities and long-term operational conditions. There are also several sources of existing TACs and localized air pollutants in the vicinity of the project. The impact of the existing sources of TACs was assessed in terms of the cumulative risk which includes the project contribution, as well as the risk on the new sensitive receptors introduced by the project.

Health Risk Methodology for Construction and Operation

Health risk impacts were addressed by predicting increased cancer risk, the increase in annual $PM_{2.5}$ concentrations, and computing the Hazard Index (HI) for non-cancer health risks. The risk impacts from the project are the combination of risk from construction and operation sources. These sources include on-site construction activity, construction truck hauling, and increased traffic from the project. To evaluate the increased cancer risks from the project, a 30-year exposure period was used, per BAAQMD guidance,[12] with the sensitive receptors being exposed to both project construction and operation emissions during this timeframe.

The project increased cancer risk is computed by summing the project construction cancer risk and operation cancer risk contribution. Unlike the increased maximum cancer risk, the annual $PM_{2.5}$ concentration, and HI values are not additive but based on an annual maximum value for the entirety of the project. The project maximally exposed individual (MEI) is identified as the sensitive receptor that is most impacted by the project's construction and operation.

[12] BAAQMD, 2022. *BAAQMD CEQA Air Quality Guidelines Appendix E*. April 2023.

The methodology for computing health risks impacts is contained in Appendix E of the BAAQMD CEQA Guidelines. TAC and $PM_{2.5}$ emissions are calculated, a dispersion model used to estimate ambient pollutant concentrations, and cancer risks and HI calculated using DPM concentrations.

Modeled Sensitive Receptors

Receptors for this assessment included locations where sensitive populations would be present for extended periods of time (i.e., chronic exposures). This includes the nearby existing residences surrounding the project site and the future Cotati Village #1 residences, as shown in Figure 1.[13] Residential receptors are assumed to include all receptor groups (e.g., third trimester, infants, children, and adults) with almost continuous exposure to project emissions. While there are additional sensitive receptors within 1,000 feet of the project site, the receptors chosen are adequate to identify maximum impacts from the project.

Health Risks from Project Construction

The primary health risk impact associated with construction projects are cancer risks associated with diesel exhaust (i.e., DPM), which is a known TAC, and exposure to high ambient concentrations of dust (i.e., $PM_{2.5}$). DPM poses both a potential health and nuisance impact to nearby receptors. A health risk assessment of the project construction activities was conducted that evaluated potential health effects to nearby sensitive receptors from construction emissions of DPM and $PM_{2.5}$.[14] This assessment included dispersion modeling to predict the offsite and onsite concentrations resulting from project construction, so that increased cancer risks and non-cancer health effects could be estimated.

Construction Emissions

The CalEEMod model provided total uncontrolled annual PM_{10} exhaust emissions (assumed to be DPM) for the off-road construction equipment and for exhaust emissions from on-road vehicles. Total DPM emissions were estimated to be 0.04 tons (72 pounds) and fugitive dust emissions ($PM_{2.5}$) to be 0.09 tons (173 pounds) from all construction stages. The on-road emissions are a result of haul truck travel during grading activities, worker travel, and vendor deliveries during construction. A trip length of half a mile was used to represent vehicle travel while at or near the construction site. It was assumed that the emissions from on-road vehicles traveling at or near the site would occur at the construction site.

Dispersion Modeling

The U.S. EPA's AERMOD model is the preferred model from predicting DPM and $PM_{2.5}$ concentrations. Due to the relatively rural nature of the surrounding area, the closest representative BAAQMD AERMOD meteorological data set are for Sonoma County Airport in Santa Rosa which has a quite different winds than the Project site area. Meteorological data collected by BAAQMD is available for Valley Ford, which is considered much more representative of the Project site. Use of this meteorological data set requires use of a slightly different dispersion model. The U.S. EPA

[13] Cotati Village #1 is anticipated to be almost completely constructed when construction begins.
[14] DPM is identified by California as a toxic air contaminant due to the potential to cause cancer.

ISCST3 dispersion model was used to predict DPM and $PM_{2.5}$ concentrations at sensitive receptors (residences) in the vicinity of the project construction area. The ISCST3 dispersion model is a BAAQMD-recommended model for use in modeling analysis of these types of emission activities for CEQA projects when meteorological data suitable for use with the AERMOD model are not available.[15] Emission sources for the construction site were grouped into two categories: exhaust emissions of DPM and fugitive $PM_{2.5}$ dust emissions.

Construction Sources

To represent the construction equipment exhaust emissions, an area source emission release height of 20 feet (6 meters) was used for the area sources.[16] The release height incorporates both the physical release height from the construction equipment (i.e., the height of the exhaust pipe) and plume rise after it leaves the exhaust pipe. Plume rise is due to both the high temperature of the exhaust and the high velocity of the exhaust gas. It should be noted that when modeling an area source, plume rise is not calculated by the ISCST3 dispersion model as it would do for a point source (exhaust stack). Therefore, the release height from an area source used to represent emissions from sources with plume rise, such as construction equipment, should be based on the height the exhaust plume is expected to achieve, not just the height of the top of the exhaust pipe.

For modeling fugitive $PM_{2.5}$ emissions, a near-ground level release height of 7 feet (2 meters) was used for the area source. Fugitive dust emissions at construction sites come from a variety of sources, including truck and equipment travel, grading activities, truck loading (with loaders) and unloading (rear or bottom dumping), loaders and excavators moving and transferring soil and other materials, etc. All of these activities result in fugitive dust emissions at various heights at the point(s) of generation. Once generated, the dust plume will tend to rise as it moves downwind across the site and exit the site at a higher elevation than when it was generated. For all these reasons, a 7-foot release height was used as the average release height across the construction site. Emissions from the construction equipment and on-road vehicle travel were distributed throughout the modeled area sources.

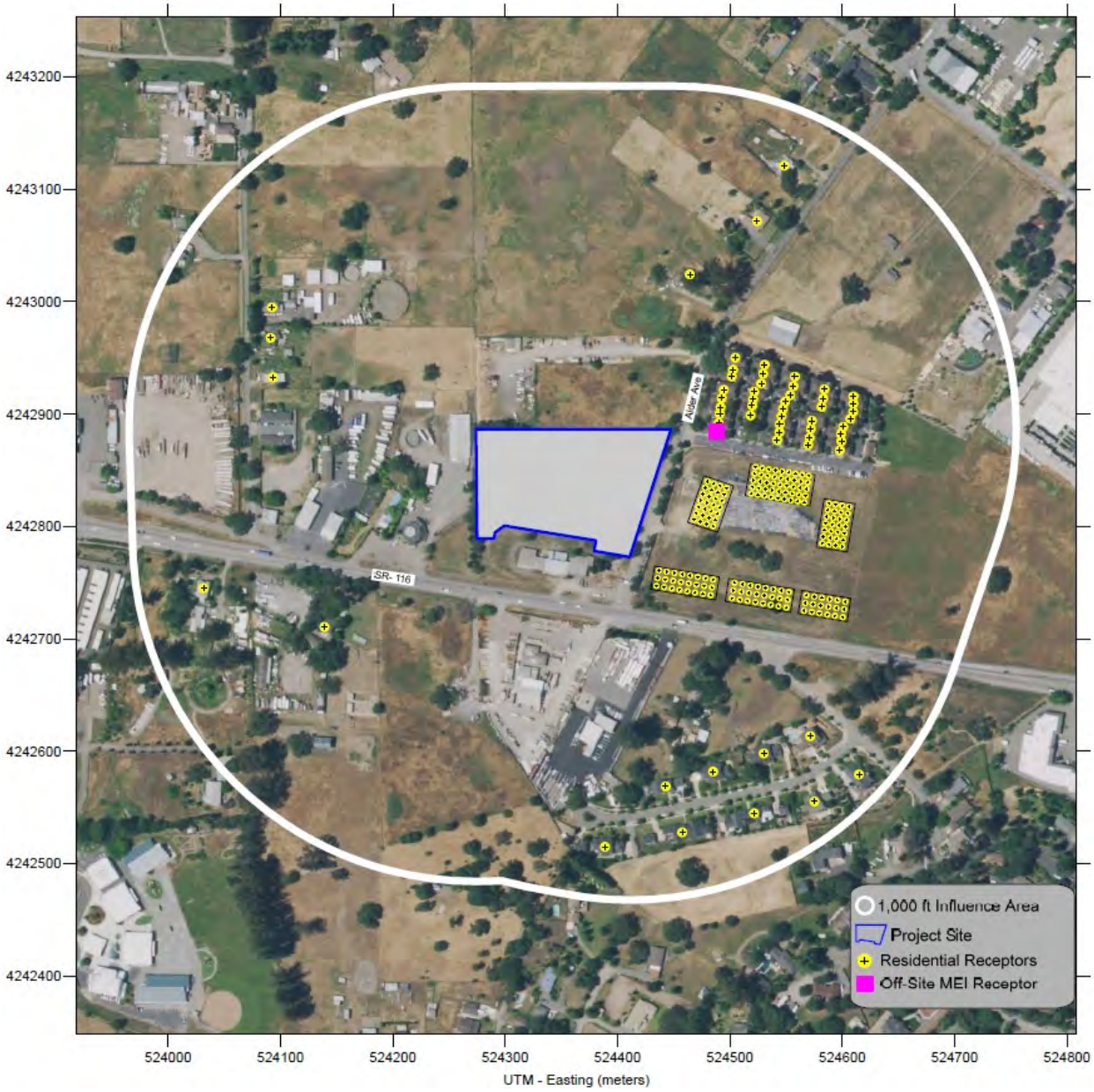
ISCST3 Inputs and Meteorological Data

Health risk impacts from construction were based on the construction emissions computed by CalEEMod and modeled with the ISCST3 model using 5 years of meteorological data (1990-1994) from the BAAQMD Valley Ford meteorological station. The Valley Ford station is about 10 miles west-southwest from the project site. DPM and $PM_{2.5}$ emissions from construction activities during the 2025 period were modeled as area sources. Concentrations were calculated at nearby residential receptors at receptor heights of 1.5 and 4.5 meters, representative of the breathing heights of residents in first and second floor levels. Construction was assumed to occur for 12 hours per day (7:00am – 7:00pm).

[15] BAAQMD, Appendix E of the 2022 *BAAQMD CEQA Guidelines*, April 2023

[16] California Air Resource Board, 2007. *Proposed Regulation for In-Use Off-Road Diesel Vehicles, Appendix D: Health Risk Methodology*. April. Web: https://ww3.arb.ca.gov/regact/2007/ordiesl07/ordiesl07.htm

Figure 1. Location of Project Construction Site, Off-Site Sensitive Receptors, and Maximum TAC Impacts (MEI)



Summary of Construction Health Risk Impacts

The maximum increased cancer risks were calculated using the modeled TAC concentrations combined with BAAQMD CEQA guidance for age-sensitivity factors and exposure parameters. Non-cancer health hazards and maximum $PM_{2.5}$ concentrations were also calculated and identified. Age-sensitivity factors reflect the greater sensitivity of infants and small children to cancer causing TACs. Third trimester, infant, child, and adult exposures were assumed to occur at all residences during the entire construction period.

The maximum modeled annual $PM_{2.5}$ concentration was calculated based on combined exhaust and fugitive concentrations. The maximum computed HI values was based on the ratio of the maximum DPM concentration modeled and the chronic inhalation DPM refence exposure level of 5 $\mu g/m^3$.

The modeled maximum annual DPM and $PM_{2.5}$ concentrations were identified at nearby sensitive receptors to find the MEI from construction activities. Results of this assessment indicated that the cancer risk MEI and annual $PM_{2.5}$ concentration MEI occurred at the same location on two different floors. The construction cancer risk MEI was located on the second floor (15 feet) of a residence in the southwest corner of the existing townhomes along Alder Avenue. The annual $PM_{2.5}$ concentration MEI was located at the same location on the first floor (5 feet). The location of the MEIs and nearby sensitive receptors are shown in Figure 1. Table 5 lists the health risks from construction at the location of the residential MEIs. *Attachment 2* to this report includes the emission calculations used for the construction modeling and the cancer risk calculations.

Health Risks from Project Operation

The Project would not include stationary sources (e.g., emergency generators) of TACs. Diesel powered vehicles are the primary concern with local traffic-generated TAC impacts. This project would generate 1,773 daily trips or 1,180 net daily trips.[17] The project traffic would be dispersed on the roadway system with a majority of the trips being from light-duty vehicles (e.g., passenger automobiles). In addition, projects with the potential to cause or contribute to increased cancer risk from traffic include those that have high numbers of diesel-powered on road trucks or use off-road diesel equipment on site, such as a warehouse distribution center, a quarry, or a manufacturing facility, may potentially expose existing or future planned receptors to substantial cancer risk levels and/or health hazards. This is not a project of concern for mobile sources given the low trip quantity and type of trips generated by the project. Therefore, emissions from project traffic are considered negligible and not included within this analysis.

Summary of Project-Related Health Risks at the Off-Site Project MEIs

For this project, the sensitive receptors identified in Figure 1 as the construction MEIs are also the project MEIs. At this location, the MEIs would be exposed to one year of project construction. The annual $PM_{2.5}$ concentration and HI values are based on an annual maximum risk for the entirety of the project. As shown in Table 5, the uncontrolled maximum cancer risks and annual $PM_{2.5}$ concentration from construction activities would exceed their respective BAAQMD single-source significance thresholds. However, with the implementation of the *Condition of Approval (COA) AQ-1*, the controlled risk and hazard values would reduce emissions such that cancer risk and $PM_{2.5}$ concentration caused by construction would no longer exceed the BAAQMD single-source significance thresholds. The uncontrolled HI does not exceed the BAAQMD single-source significance threshold.

[17] Email correspondence from Heather Gurewitz, M-Group., May 23, 2024. Attachment: *CV 2-trip generation summary.pdf.*

Table 5. Health Risk Impacts at the Off-Site Project MEIs

Source		Cancer Risk[1] (per million)	Annual $PM_{2.5}$[1] ($\mu g/m^3$)	Hazard Index
Project Construction	Without COA	**16.46 (infant)**	**0.45**	0.02
	With COA[2]	4.41 (infant)	0.16	0.01
	BAAQMD Single-Source Threshold	***10***	***0.3***	***1.0***
Exceed Threshold?	**Without COA**	***Yes***	***Yes***	*No*
	With COA[2]	*No*	*No*	*No*

Notes: [1] Maximum cancer risk and $PM_{2.5}$ concentration occur at the same receptor on different floors.
[2] Construction equipment with Tier 4 Interim engines and basic BMPs as COA.

COA AQ-1: Implement a Construction Emissions Minimization Plan that includes dust control measures and use of construction equipment that has low diesel particulate matter exhaust emissions.

To reduce construction emissions and dust generation, the Project shall implement a Construction Minimization Plan. This plan is intended to implement BAAQMD recommended measures to control dust generation and measures to reduce diesel exhaust emissions that may affect nearby residences or other sensitive receptors.

Measures to Control Dust

During any construction period ground disturbance, the applicant shall ensure that the project contractor implements measures to control dust and exhaust that are recommended by BAAQMD and listed below:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.

2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.

4. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).

5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

6. All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.

7. All trucks and equipment, including their tires, shall be washed off prior to leaving the site.

8. Unpaved roads providing access to sites located 100 feet or further from a paved road shall be treated with a 6- to 12-inch layer of compacted layer of wood chips, mulch, or gravel.

9. Publicly visible signs shall be posted with the telephone number and name of the person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's General Air Pollution Complaints number shall also be visible to ensure compliance with applicable regulations.

The measures above are consistent with BAAQMD-recommended basic BMPs for reducing fugitive dust contained in the BAAQMD CEQA Air Quality Guidelines. For this analysis, only the basic set of BMPs are required.

Measures to Control Exhaust Emissions

The Project will implement feasible measures to reduce diesel particulate matter emissions from new construction by 45 percent such that increased cancer risk from construction would be reduced below TAC significance levels as follows:

1. All construction equipment larger than 25 horsepower used at the site for more than two continuous days or 20 hours total shall meet U.S. EPA Tier 4 emission standards for PM (PM_{10} and $PM_{2.5}$), if feasible. If Tier 4 equipment is not available for a particular piece of equipment, then use equipment that meets U.S. EPA emission standards for Tier 2 or 3 engines and include particulate matter emissions control equivalent to CARB Level 3 verifiable diesel emission control devices that altogether achieve a 45 percent reduction in particulate matter exhaust in comparison to uncontrolled equipment; alternatively (or in combination).

2. Alternatively, the applicant may develop another construction operations plan demonstrating that the construction equipment used on-site would achieve a reduction in construction diesel particulate matter emissions by 45 percent or greater. Elements of the plan could include a combination of some of the following measures:
    - Installation of electric power lines during early construction phases to avoid use of diesel portable equipment,
    - Use of electrically-powered equipment,
    - Forklifts and aerial lifts used for exterior and interior building construction shall be electric or propane/natural gas powered,
    - Change in construction build-out plans to lengthen phases, and
    - Implementation of different building techniques that result in less diesel equipment usage.

    Such a construction operations plan would be subject to review by an air quality expert and approved by the City prior to construction.

Effectiveness of COA AQ-1:

The Project will implement a Construction Emissions Minimization Plan. This plan would reduce both exhaust and dust (including $PM_{2.5}$) emissions. The plan includes the use of BAAQMD-recommended measures to minimize dust generation and use of construction equipment that meets U.S. EPA Tier 4 engine standards for particulate matter emissions. Effects of this plan were included in the CalEEMod modeling.

CalEEMod was used to compute emissions associated with the implementation of COA AQ-1, assuming that all equipment meets U.S. EPA Tier 4 interim engines standard and BAAQMD basic BMPs for construction were included. With these measures implemented, the project's total construction cancer risk levels (assuming infant exposure) would be reduced by 73 percent to 4.41 chances per million and annual $PM_{2.5}$ concentrations would be reduced by 65 percent to 0.16 $\mu g/m^3$. An alternative plan that reduces DPM emissions from construction by 45 percent would reduce total cancer risk to about 9.05 chances per million and annual $PM_{2.5}$ concentrations to 0.25 $\mu g/m^3$, which would be below the BAAQMD single-source significance thresholds. The impact would be reduced to a level of *less-than-significant* with implementation of *COA AQ-1*.

Cumulative Health Risks of all TAC Sources at the Off-Site Project MEI

Cumulative health risk assessments typically look at all substantial sources of TACs that can affect sensitive receptors located within 1,000 feet of a project site (i.e., influence area). These sources include rail lines, freeways or highways, busy surface streets, and stationary sources identified by BAAQMD.

A review of the project area using BAAQMD's geographic information systems (GIS) screening maps identified the existing health risks from nearby sources at the MEIs. Highway 116 (S.R. 116) was identified as a potential TAC source that could affect the project MEIs. No existing stationary sources were identified within the influence area. In addition, there is one development project whose potential simultaneous construction would contribute to the cumulative risk. The risk impacts from this development are included within the analysis. Figure 2 shows the location of the sources affecting the MEIs. Health risk impacts from these sources upon the MEIs are reported in Table 6. Details of the cumulative screening and health risk calculations are included in *Attachment 3.*

<u>Highways – S.R.116</u>

The project site is located near S.R. 116 (see Figure 2). Cancer risk, $PM_{2.5}$ concentrations, and HI associated with traffic on S.R. 116 were estimated using BAAQMD screening values provided via GIS data files (i.e., raster files). BAAQMD raster files provide screening-level cancer risk, $PM_{2.5}$ concentrations, and HI for roadways within the Bay Area and were produced using AERMOD and 20x20-meter emissions grid. The raster file uses EMFAC2021 data for vehicle emissions and fleet mix for roadways, and includes Appendix E of the Air District's CEQA Air Quality Guidance for risk assessment assumptions. Note that these values are not adjusted for age sensitivity or exposure duration and are considered higher than values that would be obtained with refined modeling

methods. Screening-level cancer risk, $PM_{2.5}$ concentration, and HI at the project MEIs were identified using GIS software and are listed in Table 6.

BAAQMD Permitted Stationary Sources

Permitted stationary sources of air pollution near the project site were identified using BAAQMD's *Permitted Stationary Sources 2021* GIS website,[18] which identifies the location of nearby stationary sources and their estimated risk and hazard impacts, based on emissions and adjustments to account for OEHHA's risk guidance. There were no identified sources within the project's 1,000-foot influence area.

Figure 2. Project Site and Nearby TAC and $PM_{2.5}$ Sources

Construction Risk Impacts from Nearby Developments

The Cotati Village #1 is a potential project located within 1,000 feet of the proposed Project. It would include the construction of six, three-story mixed-use buildings that would consist of 177 residential units, approximately 29,415-sf of retail and office space, and 271 parking spaces. The

[18] BAAQMD, *Stationary Source Screening Map*, 2023. Web: https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=845658c19eae4594b9f4b805fb9d89a3

controlled construction risks and hazard values for the nearby development were available from its air quality technical report conducted by *Illingworth & Rodin, Inc*. Construction of this project is anticipated to be all or almost fully completed prior to construction of the proposed Project. This cumulative analysis conservatively assumed the entire construction period from the proposed project would overlap with the nearby development's construction schedule. This approach provides an overestimate of the health risk and hazard levels because it assumes that maximum impacts from the nearby development occurs concurrently with the proposed project at the proposed project's MEIs. The controlled construction risks reported in the applicable air quality assessments were included in Table 6.

Summary of Health Risks at the Project MEI

Table 6 reports both the project and cumulative health risk impacts at the sensitive receptors most affected by the project (i.e., the MEI). The project would have an exceedance with respect to health risk caused by project construction activities, since the maximum uncontrolled cancer risk and annual $PM_{2.5}$ concentration exceed the BAAQMD single-source thresholds and the annual $PM_{2.5}$ concentration exceeds the cumulative-source thresholds. With the implementation of *COA AQ-1*, the project's cancer risk and $PM_{2.5}$ concentration would be lowered to levels below the significance thresholds. The HI risk value, which includes uncontrolled and controlled, does not exceed the single- or cumulative source threshold.

Table 6. Cumulative Health Risk Impacts at the Location of the Project MEI

Source		Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Project Impacts				
Project Construction	Without COA	**16.46 (infant)**	**0.45**	0.02
	With COA	4.41 (infant)	0.16	0.01
BAAQMD Single-Source Threshold		***10***	***0.3***	***1.0***
Exceed Threshold?	*Without COA*	***Yes***	***Yes***	*No*
	With COA	*No*	*No*	
Cumulative Sources				
S.R. 116, BAAQMD Raster Screening Tool		14.17	0.25	0.04
Cotati Village #1 Controlled Construction Impacts		4.50	0.11	<0.01
Combined Sources	Without COA	35.13	**0.81**	<0.07
	With COA	23.08	0.52	<0.06
BAAQMD Cumulative Source Threshold		***100***	***0.8***	***10.0***
Exceed Threshold?	Without COA	*No*	***Yes***	*No*
	With COA	*No*	*No*	*No*

Non-CEQA: On-Site Health Risk Assessment for TAC Sources - New Project Residences

The BAAQMD CEQA Air Quality Guidelines recommend that proposed projects that include sensitive receptors address the impacts of nearby sources upon them. In addition, Cotati's General Plan *Policy CON 2.2* requires that projects minimize exposure of sensitive receptors to air pollutants and toxic air contaminants. Therefore, a health risk assessment was completed to assess the impact that the existing TAC sources would have on the new proposed sensitive receptors (i.e., residents) introduced by the project. The same TAC sources identified above were used in this

health risk assessment.[19] BAAQMD's recommended thresholds for health risks and hazards, shown in Table 1, are used to evaluate on-site exposure. All on-site health risk results are listed in Table 7. *Attachment 3* includes the screening and risk calculations for TAC source impacts upon the proposed on-site sensitive receptors.

Highways – S.R. 116

The roadway analysis for the project residents was conducted in the same manner with the BAAQMD screening tools as described above for the off-site MEIs. Table 7 shows the health screening results from the roadway.

Stationary Sources

As mentioned above, there are no nearby stationary sources within 1,000 feet of the project site.

Construction Risk Impacts from Nearby Development

Impacts from construction of the nearby development is not included in this portion of the analysis since it is assumed that construction of the Cotati Village #1 development would be completed prior to occupation of the proposed project.

Combined Cumulative Health Risk at Project Site

Health risk impacts from the existing TAC sources upon the project site are reported in Table 7. The risks from the TAC sources are compared against both the BAAQMD single-source threshold and the cumulative source threshold. As shown, existing sources of TAC emissions do not exceed the BAAQMD single-source or cumulative-source thresholds for cancer risk, annual $PM_{2.5}$ concentration, or HI.

Table 7. Cumulative Health Risk Impacts Upon the On-site Sensitive Receptors

Source	Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
S.R. 116, BAAQMD Raster Screening Tool	9.48	0.12	0.02
BAAQMD Single-Source Threshold	***10***	***0.3***	***1.0***
Exceed Threshold?	*No*	*No*	*No*
BAAQMD Cumulative Source Threshold	***100***	***0.8***	***10.0***
Exceed Threshold?	*No*	*No*	*No*

[19] We note that to the extent this analysis considers *existing* air quality issues in relation to the impact on *future residents* of the Project, it does so for informational purposes only pursuant to the judicial decisions in *CBIA v. BAAQMD* (2015) 62 Cal.4th 369, 386 and *Ballona Wetlands Land Trust v. City of Los Angeles* (2011) 201 Cal.App.4th 455, 473, which confirm that the impacts of the environment on a project are excluded from CEQA unless the project itself "exacerbates" such impacts.

GREENHOUSE GAS EMISSIONS

Setting

Gases that trap heat in the atmosphere, GHGs, regulate the earth's temperature. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate. The most common GHGs are carbon dioxide (CO_2) and water vapor but there are also several others, most importantly methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). These are released into the earth's atmosphere through a variety of natural processes and human activities. Sources of GHGs are generally as follows:

- CO_2, CH_4, and N_2O are byproducts of fossil fuel combustion.
- N_2O is associated with agricultural operations such as fertilization of crops.
- CH_4 is commonly created by off-gassing from agricultural practices (e.g., keeping livestock) and landfill operations.
- Chlorofluorocarbons (CFCs) were widely used as refrigerants, propellants, and cleaning solvents but their production has been stopped by international treaty.
- HFCs are now used as a substitute for CFCs in refrigeration and cooling.
- PFCs and sulfur hexafluoride emissions are commonly created by industries such as aluminum production and semi-conductor manufacturing.

Each GHG has its own potency and effect upon the earth's energy balance. This is expressed in terms of a global warming potential (GWP), with CO_2 being assigned a value of 1 and sulfur hexafluoride being several orders of magnitude stronger. In GHG emission inventories, the weight of each gas is multiplied by its GWP and is measured in units of CO_2 equivalents (CO_2e).

An expanding body of scientific research supports the theory that global climate change is currently affecting changes in weather patterns, average sea level, ocean acidification, chemical reaction rates, and precipitation rates, and that it will increasingly do so in the future. The climate and several naturally occurring resources within California are adversely affected by the global warming trend. Increased precipitation and sea level rise will increase coastal flooding, saltwater intrusion, and degradation of wetlands. Mass migration and/or loss of plant and animal species could also occur. Potential effects of global climate change that could adversely affect human health include more extreme heat waves and heat-related stress; an increase in climate-sensitive diseases; more frequent and intense natural disasters such as flooding, hurricanes and drought; and increased levels of air pollution.

Federal and Statewide GHG Emissions

The U.S. EPA reported that in 2022, total gross nationwide GHG emissions were 5,215.6 million metric tons (MMT) carbon dioxide equivalent (CO_2e).[20] These emissions were lower than peak levels of 7,416 MMT that were emitted in 2007. CARB updates the statewide GHG emission

[20] United States Environmental Protection Agency, 2022. *Draft Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2020*. February. Web: https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks

inventory on an annual basis where the latest inventory includes 2000 through 2020 emissions.[21] In 2020, GHG emissions from statewide emitting activities were 369.2 MMT CO_2e. The 2020 emissions have decreased by 25 percent since peak levels in 2004 and are 35.3 MMT CO_2e lower than 2019 emissions level and almost 62 MMT CO_2e below the State's 2020 GHG limit of 431 MMT CO_2e. Per capita GHG emissions in California have dropped from a 2001 peak of 13.8 MT CO_2e per person to 9.3 MT CO_2e per person in 2020.

Recent Regulatory Actions for GHG Emissions

Executive Order S-3-05 – California GHG Reduction Targets

Executive Order (EO) S-3-05 was signed by Governor Arnold Schwarzenegger in 2005 to set GHG emission reduction targets for California. The three targets established by this EO are as follows: (1) reduce California's GHG emissions to 2000 levels by 2010, (2) reduce California's GHG emissions to 1990 levels by 2020, and (3) reduce California's GHG emissions by 80 percent below 1990 levels by 2050.

Assembly Bill 32 – California Global Warming Solutions Act (2006)

Assembly Bill (AB) 32, the Global Warming Solutions Act of 2006, codified the State's GHG emissions target by directing CARB to reduce the State's global warming emissions to 1990 levels by 2020. AB 32 was signed and passed into law by Governor Schwarzenegger on September 27, 2006. Since that time, the CARB, CEC, California Public Utilities Commission (CPUC), and Building Standards Commission have all been developing regulations that will help meet the goals of AB 32 and Executive Order S-3-05, which has a target of reducing GHG emissions 85 percent below 1990 levels.

The first Scoping Plan for AB 32 was adopted by CARB in December 2008. Its most recent update was completed in December of 2022[22]. It contains the State's main strategies to achieve carbon neutrality by 2045. This plan extends and expands upon the earlier versions with a target of reducing anthropogenic emissions to 85 percent below 1990 levels by 2045. It also takes the step of adding carbon neutrality as a science-based guide and touchstone for California's climate work. Measures to achieve carbon neutrality include rapidly moving to zero emission vehicles (ZEV), removing natural gas as an option for space conditioning, increasing the number of solar arrays and wind turbines, and scaling up renewable hydrogen for hard-to-electrify end uses.

Senate Bill 375 – California's Regional Transportation and Land Use Planning Efforts (2008)

California enacted legislation (SB 375) to expand the efforts of AB 32 by controlling indirect GHG emissions caused by urban sprawl. SB 375 provides incentives for local governments and applicants to implement new conscientiously planned growth patterns. This includes incentives for creating attractive, walkable, and sustainable communities and revitalizing existing communities.

[21] CARB. 2022. *California Greenhouse Gas Emission for 2000 to 2020*. Web: https://ww2.arb.ca.gov/sites/default/files/classic/cc/inventory/2000-2020_ghg_inventory_trends.pdf
[22] CARB. 2022. Final 2022 Scoping Plan Update and Appendices. Web: https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents

The legislation also allows applicants to bypass certain environmental reviews under CEQA if they build projects consistent with the new sustainable community strategies. Development of more alternative transportation options that would reduce vehicle trips and miles traveled, along with traffic congestion, would be encouraged. SB 375 enhances CARB's ability to reach the AB 32 goals by directing the agency in developing regional GHG emission reduction targets to be achieved from the transportation sector for 2020 and 2035. CARB works with the metropolitan planning organizations (e.g., ABAG and MTC) to align their regional transportation, housing, and land use plans to reduce VMT and demonstrate the region's ability to attain its GHG reduction targets. A similar process is used to reduce transportation emissions of ozone precursor pollutants in the Bay Area.

Senate Bill 350 - Renewable Portfolio Standards

In September 2015, the California Legislature passed SB 350, which increases the states Renewables Portfolio Standard (RPS) for content of electrical generation from the 33 percent target for 2020 to a 50 percent renewables target by 2030.

Executive Order B-30-15 & Senate Bill 32 GHG Reduction Targets – 2030 GHG Reduction Target

In April 2015, Governor Brown signed EO B-30-15, which extended the goals of AB 32, setting a GHG emissions target at 40 percent of 1990 levels by 2030. On September 8, 2016, Governor Brown signed Senate Bill (SB) 32, which legislatively established the GHG reduction target of 40 percent of 1990 levels by 2030. In November 2017, CARB issued *California's 2017 Climate Change Scoping Plan*.[23] While the State is on track to exceed the AB 32 scoping plan 2020 targets, this plan is an update to reflect the enacted SB 32 reduction target.

SB 32 was passed in 2016, which codified a 2030 GHG emissions reduction target of 40 percent below 1990 levels. CARB has drafted a 2022 Scoping Plan Update to reflect the 2030 target set by Executive Order B-30-15 and codified by SB 32. The 2022 draft plan:

- Identifies a path to keep California on track to meet its SB 32 GHG reduction target of at least 40 percent below 1990 emissions by 2030.
- Identifies a technologically feasible, cost-effective path to achieve carbon neutrality by 2045 or earlier.
- Focuses on strategies for reducing California's dependency on petroleum to provide consumers with clean energy options that address climate change, improve air quality, and support economic growth and clean sector jobs.
- Integrates equity and protecting California's most impacted communities as a driving principle.
- Incorporates the contribution of natural and working lands to the state's GHG emissions, as well as its role in achieving carbon neutrality.
- Relies on the most up to date science, including the need to deploy all viable tools, including carbon capture and sequestration as well a direct air capture.

[23] California Air Resource Board, 2017. *California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Targets.* November. Web: https://ww2.arb.ca.gov/sites/default/files/classic//cc/scopingplan/scoping_plan_2017.pdf

- Evaluates multiple options for achieving our GHG and carbon neutrality targets, as well as the public health benefits and economic impacts associated with each.

The Scoping Plan was updated in 2022 and lays out how the state can get to carbon neutrality by 2045 or earlier. It is the first Scoping Plan that adds carbon neutrality as a science-based guide and touchstone beyond statutorily established emission reduction targets.[24]

The mid-term 2030 target is considered critical by CARB on the path to obtaining an even deeper GHG emissions target of 80 percent below 1990 levels by 2050, as directed in Executive Order S-3-05. The 2022 Scoping Plan outlines the suite of policy measures, regulations, planning efforts, and investments in clean technologies and infrastructure, providing a blueprint to continue driving down GHG emissions and to not only obtain the statewide goals, but cost-effectively achieve carbon-neutrality by 2045 or earlier. In the 2022 Scoping Plan, CARB recommends:

- VMT per capita reduced 12% below 2019 levels by 2030 and 22% below 2019 levels by 2045.
- 100% of Light-duty vehicle sales are zero emissions vehicles (ZEV) by 2035.
- 100% of medium duty/heavy duty vehicle sales are ZEV by 2040.
- 100% of passenger and other locomotive sales are ZEV by 2030.
- 100% of line haul locomotive sales are ZEV by 2035.
- All electric appliances in new residential and commercial building beginning 2026 (residential) and 2029 (commercial).
- 80% of residential appliance sales are electric by 2030 and 100% of residential appliance sales are electric by 2035.
- 80% of commercial appliance sales are electric by 2030 and 100% of commercial appliance sales are electric by 2045.

SB 743 Transportation Impacts

Senate Bill 743 required lead agencies to abandon the old "level of service" metric for evaluating a project's transportation impacts, which was based solely on the amount of delay experienced by motor vehicles. In response, the Governor's Office of Planning and Research (OPR) developed a VMT metric that considered other factors such as reducing GHG emissions and developing multimodal transportation[25]. A VMT-per-capita metric was adopted into the CEQA Guidelines Section 15064.3 in November 2017. Given current baseline per-capita VMT levels computed by CARB in the 2030 Scoping Plan of 22.24 miles per day for light-duty vehicles and 24.61 miles per day for all vehicle types, the reductions needed to achieve the 2050 climate goal are 16.8 percent for light-duty vehicles and 14.3 percent for all vehicle types combined. Based on this analysis (as well as other factors), OPR recommended using a 15-percent reduction in per capita VMT as an appropriate threshold of significance for evaluating transportation impacts.

[24] https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents
[25] Governor's Office of Planning and Research. 2018. *Technical Advisory on Evaluating Transportation Impacts in CEQA*. December.

Executive Order B-55-18 – Carbon Neutrality

In 2018, a new statewide goal was established to achieve carbon neutrality as soon as possible, but no later than 2045, and to maintain net negative emissions thereafter. CARB and other relevant state agencies are tasked with establishing sequestration targets and creating policies/programs that would meet this goal.

Senate Bill 100 – Current Renewable Portfolio Standards

In September 2018, SB 100 was signed by Governor Brown to revise California's RPS program goals, furthering California's focus on using renewable energy and carbon-free power sources for its energy needs. The bill would require all California utilities to supply a specific percentage of their retail sales from renewable resources by certain target years. By December 31, 2024, 44 percent of the retails sales would need to be from renewable energy sources, by December 31, 2026 the target would be 40 percent, by December 31, 2027 the target would be 52 percent, and by December 31, 2030 the target would be 60 percent. By December 31, 2045, all California utilities would be required to supply retail electricity that is 100 percent carbon-free and sourced from eligible renewable energy resources to all California end-use customers.

California Building Standards Code – Title 24 Part 11 & Part 6

The California Green Building Standards Code (CALGreen Code) is part of the California Building Standards Code under Title 24, Part 11.[26] The CALGreen Code encourages sustainable construction standards that involve planning/design, energy efficiency, water efficiency resource efficiency, and environmental quality. These green building standard codes are mandatory statewide and are applicable to residential and non-residential developments. The most recent CALGreen Code (2022 California Building Standard Code) was effective as of January 1, 2023.

The California Building Energy Efficiency Standards (California Energy Code) is under Title 24, Part 6 and is overseen by the California Energy Commission (CEC). This code includes design requirements to conserve energy in new residential and non-residential developments, while being cost effective for homeowners. This Energy Code is enforced and verified by cities during the planning and building permit process. The current energy efficiency standards (2022 Energy Code) replaced the 2019 Energy Code as of January 1,2023. Under the 2019 standards, single-family homes are predicted to be 53 percent more efficient than homes built under the 2016 standard due more stringent energy-efficiency standards and mandatory installation of solar photovoltaic systems. For nonresidential developments, it is predicted that these buildings will use 30 percent less energy due to lightening upgrades.[27]

Requirements for electric vehicle (EV) charging infrastructure are set forth in Title 24 of the California Code of Regulations. The CALGreen standards consist of a set of mandatory standards required for new development, as well as two more voluntary standards known as Tier 1 and Tier 2. The CalGreen 2022 standards require deployment of additional EV chargers in various building

[26] See: https://www.dgs.ca.gov/BSC/Resources/Page-Content/Building-Standards-Commission-Resources-List-Folder/CALGreen#:~:text=CALGreen%20is%20the%20first%2Din,to%201990%20levels%20by%202020.
[27] See: https://www.energy.ca.gov/sites/default/files/2020-03/Title_24_2019_Building_Standards_FAQ_ada.pdf

types, including multifamily residential and nonresidential land uses. They include requirements for both EV capable parking spaces and the installation of Level 2 EV supply equipment for multifamily residential and nonresidential buildings. The 2022 CALGreen standards include requirements for both EV readiness, installation of EV chargers, and include both mandatory requirements and more aggressive voluntary Tier 1 and Tier 2 provisions. Providing EV charging infrastructure that meets current CALGreen requirements will not be sufficient to power the anticipated more extensive level of EV penetration in the future that is needed to meet SB 30 climate goals.

CEC studies have identified the most aggressive electrification scenario as putting the building sector on track to reach the carbon neutrality goal by 2045.[28] Installing new natural gas infrastructure in new buildings will interfere with this goal. To meet the State's goal, communities have been adopting "Reach" codes that prohibit natural gas connections in new and remodeled buildings.

Advanced Clean Cars

The Advanced Clean Cars Program, originally adopted by CARB in 2012, was designed to bring together CARB's traditional passenger vehicle requirements to meet federal air quality standards and also support California's AB 32 goals to develop and implement programs to reduce GHG emissions back down to 1990 levels by 2020, a goal achieved in 2016 as a result of numerous emissions reduction programs.

Advanced Clean Cars II (ACC II) is phase two of the original rule. ACC II establishes a year-by-year process, starting in 2026, so all new cars and light trucks sold in California will be zero-emission vehicles by 2035, including plug-in hybrid electric vehicles. The regulation codifies the light-duty vehicle goals set out in Governor Newsom's Executive Order N-79-20. Currently, 16 percent of new light-duty vehicles sold in California are zero emissions or plug-in hybrids. By 2030, 68 percent of new vehicles sold in California would be zero emissions and 100 percent by 2035.

<u>City of Cotati</u>

The City of Cotati currently has no adopted Climate Action Plan (CAP); however, Cotati General Plan Policy CON2.8 supports the development and implementation of a CAP. The City is involved in Sonoma County's efforts to reduce countywide emissions to 25% below 1990 emissions by 2020.[29]

[28] California Energy Commission. 2021. F*inal Commission Report: California Building Decarbonization Assessment. Publication Number CEC-400-2021-006-CMF*.August

[29] City of Cotati, 2016. *Cotati Commitments to meeting community greenhouse gas reduction goals.* Accessed October 10,2022. Web: https://www.cotaticity.org/DocumentCenter/View/255/Climate-Action-PDF

BAAQMD GHG Significance Thresholds

On April 20, 2022, BAAQMD adopted new thresholds of significance for operational GHG emissions from land use projects for projects beginning the CEQA process. The following framework is how BAAQMD will determine GHG significance moving forward.[30] Note BAAQMD intends that the thresholds apply to projects that begin the CEQA process after adoption of the thresholds, unless otherwise directed by the lead agency. The new thresholds of significance are:

A. Projects must include, at a minimum, the following project design elements:
   a. Buildings
      i. The project will not include natural gas appliances or natural gas plumbing (in both residential and non-residential development).
      ii. The project will not result in any wasteful, inefficient, or unnecessary energy usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines.
   b. Transportation
      i. Achieve a reduction in project-generated vehicle miles traveled (VMT) below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent) or meet a locally adopted Senate Bill 743 VMT target, reflecting the recommendations provided in the Governor's Office of Planning and Research's Technical Advisory on Evaluating Transportation Impacts in CEQA:
         1. Residential Projects: 15 percent below the existing VMT per capita
         2. Office Projects: 15 percent below the existing VMT per employee
         3. Retail Projects: no net increase in existing VMT
      ii. Achieve compliance with off-street electric vehicle requirements in the most recently adopted version of CALGreen Tier 2.

B. Be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b).

Any new land use project would have to include either section A or B from the above list, not both, to be considered in compliance with BAAQMD's GHG thresholds of significance.

Impact GHG-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

GHG emissions associated with development of the proposed project would occur over the short-term from construction activities, consisting primarily of emissions from equipment exhaust and worker and vendor trips. There would also be long-term operational emissions associated with vehicular traffic within the project vicinity, energy and water usage, and solid waste disposal. Emissions for the proposed project are discussed below.

[30] Justification Report: BAAQMD CEQA Thresholds for Evaluating the Significance of Climate Impacts from Land Use Project and Plans. Web: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa-thresholds-2022/justification-report-pdf.pdf?la=en

CalEEMod Modeling

CalEEMod was used to predict GHG emissions from operation of the site assuming full build-out of the project. The project land use types and size and other project-specific information were input to the model, as described above within the construction period emissions. CalEEMod output is included in *Attachment 1*.

Construction GHG Emissions

GHG emissions associated with construction were computed at 240 MT of CO_2e for the total construction period. These are the emissions from on-site operation of construction equipment, vendor and hauling truck trips, and worker trips. Neither the City nor BAAQMD have an adopted threshold of significance for construction-related GHG emissions, though the California Office of Planning and Research (OPR) recommends quantifying emissions and disclosing that GHG emissions would occur during construction, even in cases where BAAQMD does not. BAAQMD encourages the incorporation of best management practices to reduce GHG emissions during construction where feasible and applicable.

Operational GHG Emissions

The CalEEMod model, along with the project vehicle trip generation rates, were used to estimate daily emissions associated with operation of the proposed project. As shown in Table 8 for informational purposes, annual GHG emissions resulting from operation of the proposed project are predicted to be 1,488 MT of CO_2e in 2026.

Table 8. Annual Project GHG Emissions (CO_2e) in Metric Tons

Source Category	Proposed Project in 2026
Mobile	1,427
Area	2
Energy Consumption	19
Water Usage	3
Solid Waste Generation	37
Total (MT CO_{2e}/year)	1,488

There are no quantified thresholds for GHG emissions adopted by the City or currently used by BAAQMD for evaluation of project GHG emissions. BAAQMD in their latest adopted GHG thresholds recommend that the significance of project GHG emissions be evaluated based on consistency with an adopted GHG reduction plan or meet design elements that are critical in reducing GHG emissions. As described above, the City has not adopted a CAP but has met design elements that will reduce GHG emissions such as Title 24 and Cal Green Tier 1 compliance, all electric appliances, and the required amount of EV parking spaces.

The Project generally meets the requirements for Project thresholds identified above by BAAQMD. To avoid interference with statewide GHG reduction measures identified in CARB's Scoping Plan and SB 100 goals, the project would include the following standard requirements:

1. Avoid construction of new natural gas connections for the residential buildings,
    - Conforms – the applicant has confirmed that the project will be all electric and not include natural gas infrastructure.
2. Avoid wasteful or inefficient use of electricity,
    - Conforms – would meet CALGreen Building Standards Code requirements that are considered to be energy efficient.
3. Include electric vehicle (EV) charging infrastructure that meets current Building Code CALGreen Tier 2 compliance, and
    - **Does Not Conform** – project will provide EV parking spaces as required by Cotati Municipal Code 14.04.130, which only meets the CalGreen Tier 1 requirements for EV parking and charging infrastructure.
4. Reduce VMT per service population by 15 percent over regional average.
    - Conforms – According to the traffic analysis,[31] the project daily VMT per capita is 14.6 miles, which is lower than the significance threshold of 15.5 miles. The retail coffee shop screens out because it is considered to be local serving retail and would not increase total VMT.

COA GHG-1: Include EV parking and charging infrastructure that would meet CalGreen Tier 2 requirements.

The applicant and City shall develop a plan to include EV charging stations and infrastructure to meet the general requirements of CalGreen Tier 2, which is the threshold used by BAAQMD to judge GHG impacts from new land use projects.

Effectiveness of COA GHG-1:

With appropriate EV charging stations and infrastructure implemented, the project would meet all the GHG requirements and conform with Threshold A.

Impact GHG-2: Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The proposed Project buildings would be constructed in conformance with CALGreen, the Title 24 Building Code, and the City's General Plan, which requires high-efficiency water fixtures, water-efficient irrigation systems, and compliance with current energy efficacy standards. The Project would not interfere with City or State efforts to reduce GHG emissions.

Conclusions

The purpose of this report is to address air quality, health risk, and greenhouse gas (GHG) impacts associated with the construction and operation of this proposed Cotati Village #2 project. Air quality impacts from this project would be associated with the demolition/grading of the existing land uses, construction of the new building and infrastructure, and operation of the project. Air

[31] Email correspondence from Heather Gurewitz, M-Group and Barry Bergman, W-Trans, May 28, 2024.

pollutants and GHG emissions associated with construction and operation of the project were predicted using appropriate computer models. In addition, the potential project health risk impacts (includes construction and operation) and the impact of existing toxic air contaminant (TAC) sources affecting the nearby and proposed sensitive receptors were evaluated. The analysis was conducted following guidance provided by BAAQMD. Findings of this report are as follows:

- Emissions of criteria air pollutants from construction and operation of the Project were modeled to be below thresholds recommended by BAAQMD that are used to judge the significance in terms of burden to air basin-wide emissions.

- Construction period emissions of diesel particulate matter, which is a TAC, are above BAAQMD project-level thresholds. *COA AQ-1* would reduce emissions of diesel particulate matter and dust. *COA AQ-1* would reduce TAC emissions by 73 percent or more and dust emissions by 65 percent or more. This would reduce the impact to a level of less-than-significant. Operation of the Project is not anticipated to result in substantial localized TAC emissions that would cause or contribute to significant impacts.

- The Project would meet three of the four GHG thresholds by not having significant VMT impacts, would be all electric, and constructed to meet current CalGreen standards that would make it energy efficient. However, the Project would only meet the City's CalGreen Tier 1 requirements for EV parking and charging infrastructure and not CalGreen Tier 2 as required by the BAAQMD GHG threshold. *COA GHG-1* would require CalGreen Tier 2 for EV parking and charging infrastructure, and then the project would meet all the GHG requirements and conform with Threshold A.

Supporting Documentation

Attachment 1 includes the CalEEMod output for project construction and operational criteria air pollutant. Also included are any modeling assumptions.

Attachment 2 is the health risk assessment. This includes the summary of the dispersion modeling and the cancer risk calculations for construction. The ISCST3 dispersion modeling files for this assessment, which are quite voluminous, are available upon request and would be provided in digital format.

Attachment 3 includes the cumulative screening results and health risk calculations from sources affecting the MEIs and project sensitive receptors.

Attachment 1: CalEEMod Modeling Inputs and Outputs

Construction Criteria Air Pollutants							
Unmitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	PM2.5 Fugitive	**CO2e**	
Year	Tons					MT	
Construction Equipment							
2025	1.13	0.93	0.04	0.03	0.10	239.90	
	Total Construction Emissions						
Tons	1.13	0.93	0.04	0.03		239.90	
Pounds/Workdays	*Average Daily Emissions*					Workdays	
2025	10.43	8.57	0.34	0.31			**216**
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**			
	Total Construction Emissions						
Pounds	2252.95	1850.66	72.72	66.99		0.00	
Average	10.43	8.57	0.34	0.31		0.00	216.00
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**			

Operational Criteria Air Pollutants				
Unmitigated	ROG	NOX	Total PM10	Total PM2.5
Year	Tons			
Total	1.68	0.96	1.38	0.36
	Existing Use Emissions			
Total				
	Net Annual Operational Emissions			
Tons/year	1.68	0.96	1.38	0.36
Threshold - Tons/year	**10.0**	**10.0**	**15.0**	**10.0**
	Average Daily Emissions			
Pounds Per Day	9.20	5.27	7.55	1.98
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**

Category	**CO2e**			
	Project	Existing	Project 2030	Existing
Mobile	1426.23			
Area	1.60			
Energy	18.88			
Water	3.33			
Waste	37.22			
Refrig.	0.75			
TOTAL	1488.00	0.00	0.00	0.00
Net GHG Emissions		1488.00		0.00

Number of Days Per Year				
2025	1/5/2025	11/1/2025	301	216
			301	**216** ***Total Workdays***

Phase	**Start Date**	**End Date**	**Days/Week**	**Workdays**
Demolition	1/5/2025	1/7/2025	5	2
Site Preparation	1/8/2025	2/9/2025	5	23
Grading	2/10/2025	3/3/2025	5	16
Building Construction	3/21/2025	9/15/2025	5	127
Paving	10/11/2025	11/1/2025	5	15
Architectural Coating	9/16/2025	10/10/2025	5	19
Trenching	3/4/2025	3/20/2025	5	13

Air Quality/Noise Construction Information Data Request

Project Name: Cotati Village #2

See Equipment Type TAB for type, horsepower and load factor

Complete ALL Portions in Yellow

Project Size	126	Dwelling Units	4 total project acres disturbed
	141,680	s.f. residential	
		s.f. retail	
	2250	s.f. office/commercial	
		s.f. other, specify:	
		s.f. parking garage	spaces
		s.f. parking lot	168 spaces
Construction Days (i.e, M-F)	Monday	to	Friday
Construction Hours	7 am	to	7 pm

Pile Driving? Y/N? NO

Project include on-site GENERATOR OR FIRE PUMP during project OPERATION (not construction)? Y/N? NO

IF YES (if BOTH separate values) -->

Kilowatts/Horsepower: _____

Fuel Type: _____

Location in project (Plans Desired if Available):

DO NOT MULTIPLY EQUIPMENT HOURS/DAY BY THE QUANTITY OF EQUIPMENT

Quantity	Description	HP	Load Factor	Hours/day	Total Work Days	Avg. Hours per day	HP Annual Hours	Comments
	Demolition	**Start Date:**	**1/5/2025**	**Total phase:**	**2**			**Overall Import/Export Volumes**
		End Date:	**1/7/2025**					
1	Concrete/Industrial Saws	81	0.73			0	0	**Demolition Volume**
3	Excavators	158	0.38			0	0	Square footage of buildings to be demolished
2	Rubber-Tired Dozers	247	0.4			0	0	(*or* total tons to be hauled)
	Tractors/Loaders/Backhoes	97	0.37	8	2	8	0	1200 square feet *or*
	Other Equipment?							0 Hauling volume (tons)
								Any pavement demolished and hauled? 0 tons
	Site Preparation	**Start Date:**	**1/8/2025**	**Total phase:**	**22**			
		End Date:	**2/9/2025**					
	Graders	187	0.41			0	0	
3	Rubber Tired Dozers	247	0.4	8	11	4	26083	
4	Tractors/Loaders/Backhoes	97	0.37	8	11	4	12633	
	Other Equipment?							
	Grading / Excavation	**Start Date:**	**2/10/2025**	**Total phase:**	**13**			
		End Date:	**3/3/2025**					**Soil Hauling Volume**
1	Excavators	158	0.38	8	13	8	6244	Export volume = 0 cubic yards?
1	Graders	187	0.41	8	13	8	7974	Import volume = 1200 cubic yards?
1	Rubber Tired Dozers	247	0.4	8	13	8	10275	
	Concrete/Industrial Saws	81	0.73			0	0	
3	Tractors/Loaders/Backhoes	97	0.37	8	13	8	11198	
	Other Equipment?							
	Trenching/Foundation	**Start Date:**	**3/4/2025**	**Total phase:**	**12**			
		End Date:	**3/20/2025**					
1	Tractor/Loader/Backhoe	97	0.37	8	12	8	3445	
1	Excavators	158	0.38	8	12	8	5764	
	Other Equipment?							
	Building - Exterior	**Start Date:**	**3/21/2025**	**Total phase:**	**121**			**Cement Trucks? 90 Total Round-Trips**
		End Date:	**9/15/2025**					
1	Cranes	231	0.29	7	0	0	0	Electric? (Y/N) ___ Otherwise assumed diesel
3	Forklifts	89	0.2	8	121	8	51691	Liquid Propane (LPG)? (Y/N) ___ Otherwise Assumed diesel
1	Generator Sets	84	0.74	8	121	8	60171	Or temporary line power? (Y/N) Y
3	Tractors/Loaders/Backhoes	97	0.37	7	121	7	91196	
1	Welders	46	0.45	8	121	8	20038	
	Other Equipment?							
	Building - Interior/Architectural Coating	**Start Date:**	**9/16/2025**	**Total phase:**	**18**			
		End Date:	**10/10/2025**					
1	Air Compressors	78	0.48	6	18	6	4044	
	Aerial Lift	62	0.31			0	0	
	Other Equipment?							
	Paving	**Start Date:**	**10/11/2025**	**Total phase:**	**14**			
		Start Date:	**11/1/2025**					
	Cement and Mortar Mixers	9	0.56			0	0	
2	Pavers	130	0.42	8	14	8	12230	**Asphalt? 499 cubic yards or ____ round trips?**
2	Paving Equipment	132	0.36	8	14	8	10644	
2	Rollers	80	0.38	8	14	8	6810	
	Tractors/Loaders/Backhoes	97	0.37			0	0	
	Other Equipment?							
	Additional Phases	**Start Date:**	**1/5/2025**	**Total phase:**	**202**			
		Start Date:	**11/1/2025**					
						0	0	
						0	0	
						0	0	
						0	0	
						0	0	

Equipment types listed in "Equipment Types" worksheet tab.

Equipment listed in this sheet is to provide an example of inputs

It is assumed that water trucks would be used during grading

Add or subtract phases and equipment, as appropriate

Modify horsepower or load factor, as appropriate

Complete one sheet for each project component

Traffic Consultant Trip Gen						CalEEMod Default		
Land Use		**Size**	**Daily Trips**	**New Trips**	**Weekday Trip Gen**	**Weekday**	**Sat**	**Sun**
Retail - Coffee Shop	ksf	2.25	1201	642	***285.33***	346.23	696	500
Internal Capture Reduction			*-34*			*Rev*	***573.58***	***412.06***
Diverted Reduction			*-525*					
Mid-Rise Residential	DU	126	572	538	***4.27***	5.44	4.91	4.09
Internal Capture Reduction			*-34*			*Rev*	***3.85***	***3.21***
		Total	1180					

Cotati Village 2 – Trip Generation Summary

Land Use	**Units**	**Daily**		**AM Peak Hour**				**PM Peak Hour**			
		Rate	**Trips**	**Rate**	**Trips**	**In**	**Out**	**Rate**	**Trips**	**In**	**Out**
Proposed											
Coffee/Donut Shop	2.250 ksf	533.57*	1,201	93.08	209	107	102	32.29	73	36	37
Internal Capture			-34		-3	-2	-1		-3	-1	-2
Subtotal			1,167		206	105	101		70	35	35
Diverted Link			-525**	-45%	-93	-47	-46	-49%	-34	-17	-17
Total			642		113	58	55		36	18	18
Multifamily Residential	126 du	4.54	572	0.37	47	11	36	0.39	49	30	19
Internal Capture			-34**	-6%	-3	-1	-2	-6%	-3	-2	-1
Total Project Trip Generation			**1,180**		**157**	**68**	**89**		**82**	**46**	**36**

Note: du = dwelling unit; ksf = 1,000 square feet; * Rate is for Coffee/Donut Shop with Drive-Through Window; ** Daily internal trips and diverted link estimated using the average percentages for the a.m. and p.m. peak hours

Table 6 – Vehicle Miles Traveled Analysis Summary – Residential Component

VMT Metric	**Baseline VMT Rate**	**Significance Threshold**	**Project VMT Rate**	**Resulting Significance**
Residential VMT per Capita (Citywide Baseline)	*18.3*	15.5	14.6	Less than Significant

Note: VMT Rate is measured in VMT/Capita, or the number of daily miles driven per resident

24-049 Cotati Village #2 BMPs T4i 2026 Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

1.2. Land Use Types

1.3. User-Selected Emission Reduction Measures by Emissions Sector

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

2.2. Construction Emissions by Year, Unmitigated

2.3. Construction Emissions by Year, Mitigated

2.4. Operations Emissions Compared Against Thresholds

2.5. Operations Emissions by Sector, Unmitigated

2.6. Operations Emissions by Sector, Mitigated

3. Construction Emissions Details

3.1. Demolition (2025) - Unmitigated

3.2. Demolition (2025) - Mitigated

3.3. Site Preparation (2025) - Unmitigated

3.4. Site Preparation (2025) - Mitigated

3.5. Grading (2025) - Unmitigated

3.6. Grading (2025) - Mitigated

3.7. Building Construction (2025) - Unmitigated

3.8. Building Construction (2025) - Mitigated

3.9. Paving (2025) - Unmitigated

3.10. Paving (2025) - Mitigated

3.11. Architectural Coating (2025) - Unmitigated

3.12. Architectural Coating (2025) - Mitigated

3.13. Trenching (2025) - Unmitigated

3.14. Trenching (2025) - Mitigated

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

4.1.2. Mitigated

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

4.2.2. Electricity Emissions By Land Use - Mitigated

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

4.2.4. Natural Gas Emissions By Land Use - Mitigated

4.3. Area Emissions by Source

4.3.1. Unmitigated

4.3.2. Mitigated

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

4.4.2. Mitigated

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

4.5.2. Mitigated

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

4.6.2. Mitigated

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

4.7.2. Mitigated

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

4.8.2. Mitigated

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

4.9.2. Mitigated

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.2.2. Mitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.3.2. Mitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.9. Operational Mobile Sources

5.9.1. Unmitigated

5.9.2. Mitigated

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

5.10.2. Architectural Coatings

5.10.3. Landscape Equipment

5.10.4. Landscape Equipment - Mitigated

5.11. Operational Energy Consumption

5.11.1. Unmitigated

5.11.2. Mitigated

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

5.12.2. Mitigated

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.13.2. Mitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.14.2. Mitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.15.2. Mitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1.2. Mitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.1.2. Mitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

5.18.2.2. Mitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	24-049 Cotati Village #2 BMPs T4i 2026
Construction Start Date	1/5/2025
Operational Year	2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.20
Precipitation (days)	9.60
Location	7515 Alder Ave, Cotati, CA 94931, USA
County	Sonoma-San Francisco
City	Cotati
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	972
EDFZ	2
Electric Utility	Sonoma Clean Power
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.23

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Apartments Mid Rise	126	Dwelling Unit	4.00	141,680	24,302	0.00	323	—
Fast Food Restaurant w/o Drive Thru	2.25	1000sqft	0.00	2,250	0.00	—	—	—
Parking Lot	168	Space	0.00	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers
Construction	C-10-A	Water Exposed Surfaces
Construction	C-11	Limit Vehicle Speeds on Unpaved Roads

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Unmit.	106	8.19	0.31	0.88	1.19	0.28	0.21	0.50	2,870
Mit.	106	8.36	0.11	0.88	0.99	0.10	0.21	0.32	2,870
% Reduced	< 0.5%	-2%	65%	—	17%	64%	—	37%	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Unmit.	106	17.4	0.73	9.97	10.7	0.67	5.09	5.71	3,842
Mit.	106	11.4	0.11	3.98	4.03	0.10	2.00	2.05	3,842
% Reduced	< 0.5%	35%	85%	60%	62%	85%	61%	64%	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—

Unmit.	6.17	5.07	0.20	1.28	1.48	0.18	0.55	0.74	1,449
Mit.	5.83	4.34	0.05	0.71	0.77	0.05	0.27	0.32	1,449
% Reduced	6%	14%	74%	44%	48%	73%	52%	57%	—
Annual (Max)	—	—	—	—	—	—	—	—	—
Unmit.	1.13	0.93	0.04	0.23	0.27	0.03	0.10	0.13	240
Mit.	1.06	0.79	0.01	0.13	0.14	0.01	0.05	0.06	240
% Reduced	6%	14%	74%	44%	48%	73%	52%	57%	—

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—
2025	106	8.19	0.31	0.88	1.19	0.28	0.21	0.50	2,870
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—
2025	106	17.4	0.73	9.97	10.7	0.67	5.09	5.71	3,842
Average Daily	—	—	—	—	—	—	—	—	—
2025	6.17	5.07	0.20	1.28	1.48	0.18	0.55	0.74	1,449
Annual	—	—	—	—	—	—	—	—	—
2025	1.13	0.93	0.04	0.23	0.27	0.03	0.10	0.13	240

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—
2025	106	8.36	0.11	0.88	0.99	0.10	0.21	0.32	2,870

Daily - Winter (Max)	—	—	—	—	—	—	—	—	—
2025	106	11.4	0.11	3.98	4.03	0.10	2.00	2.05	3,842
Average Daily	—	—	—	—	—	—	—	—	—
2025	5.83	4.34	0.05	0.71	0.77	0.05	0.27	0.32	1,449
Annual	—	—	—	—	—	—	—	—	—
2025	1.06	0.79	0.01	0.13	0.14	0.01	0.05	0.06	240

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Unmit.	12.2	6.95	0.12	10.8	10.9	0.11	2.75	2.86	13,341
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Unmit.	11.2	7.91	0.11	10.8	10.9	0.11	2.75	2.86	12,677
Average Daily (Max)	—	—	—	—	—	—	—	—	—
Unmit.	9.20	5.27	0.08	7.47	7.55	0.08	1.90	1.98	8,988
Annual (Max)	—	—	—	—	—	—	—	—	—
Unmit.	1.68	0.96	0.01	1.36	1.38	0.01	0.35	0.36	1,488

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Mobile	7.91	6.88	0.11	10.8	10.9	0.11	2.75	2.86	12,958

Area	4.28	0.07	< 0.005	—	< 0.005	< 0.005	—	< 0.005	19.6
Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	114
Water	—	—	—	—	—	—	—	—	20.1
Waste	—	—	—	—	—	—	—	—	225
Refrig.	—	—	—	—	—	—	—	—	4.53
Total	12.2	6.95	0.12	10.8	10.9	0.11	2.75	2.86	13,341
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Mobile	7.56	7.91	0.11	10.8	10.9	0.11	2.75	2.86	12,313
Area	3.63	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	114
Water	—	—	—	—	—	—	—	—	20.1
Waste	—	—	—	—	—	—	—	—	225
Refrig.	—	—	—	—	—	—	—	—	4.53
Total	11.2	7.91	0.11	10.8	10.9	0.11	2.75	2.86	12,677
Average Daily	—	—	—	—	—	—	—	—	—
Mobile	5.24	5.24	0.08	7.47	7.55	0.07	1.90	1.98	8,614
Area	3.95	0.03	< 0.005	—	< 0.005	< 0.005	—	< 0.005	9.66
Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	114
Water	—	—	—	—	—	—	—	—	20.1
Waste	—	—	—	—	—	—	—	—	225
Refrig.	—	—	—	—	—	—	—	—	4.53
Total	9.20	5.27	0.08	7.47	7.55	0.08	1.90	1.98	8,988
Annual	—	—	—	—	—	—	—	—	—
Mobile	0.96	0.96	0.01	1.36	1.38	0.01	0.35	0.36	1,426
Area	0.72	0.01	< 0.005	—	< 0.005	< 0.005	—	< 0.005	1.60
Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	18.9
Water	—	—	—	—	—	—	—	—	3.33

Waste	—	—	—	—	—	—	—	—	37.2
Refrig.	—	—	—	—	—	—	—	—	0.75
Total	1.68	0.96	0.01	1.36	1.38	0.01	0.35	0.36	1,488

2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Mobile	7.91	6.88	0.11	10.8	10.9	0.11	2.75	2.86	12,958
Area	4.28	0.07	< 0.005	—	< 0.005	< 0.005	—	< 0.005	19.6
Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	114
Water	—	—	—	—	—	—	—	—	20.1
Waste	—	—	—	—	—	—	—	—	225
Refrig.	—	—	—	—	—	—	—	—	4.53
Total	12.2	6.95	0.12	10.8	10.9	0.11	2.75	2.86	13,341
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Mobile	7.56	7.91	0.11	10.8	10.9	0.11	2.75	2.86	12,313
Area	3.63	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	114
Water	—	—	—	—	—	—	—	—	20.1
Waste	—	—	—	—	—	—	—	—	225
Refrig.	—	—	—	—	—	—	—	—	4.53
Total	11.2	7.91	0.11	10.8	10.9	0.11	2.75	2.86	12,677
Average Daily	—	—	—	—	—	—	—	—	—
Mobile	5.24	5.24	0.08	7.47	7.55	0.07	1.90	1.98	8,614
Area	3.95	0.03	< 0.005	—	< 0.005	< 0.005	—	< 0.005	9.66

Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	114
Water	—	—	—	—	—	—	—	—	20.1
Waste	—	—	—	—	—	—	—	—	225
Refrig.	—	—	—	—	—	—	—	—	4.53
Total	9.20	5.27	0.08	7.47	7.55	0.08	1.90	1.98	8,988
Annual	—	—	—	—	—	—	—	—	—
Mobile	0.96	0.96	0.01	1.36	1.38	0.01	0.35	0.36	1,426
Area	0.72	0.01	< 0.005	—	< 0.005	< 0.005	—	< 0.005	1.60
Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	18.9
Water	—	—	—	—	—	—	—	—	3.33
Waste	—	—	—	—	—	—	—	—	37.2
Refrig.	—	—	—	—	—	—	—	—	0.75
Total	1.68	0.96	0.01	1.36	1.38	0.01	0.35	0.36	1,488

3. Construction Emissions Details

3.1. Demolition (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	1.10	0.04	—	0.04	0.04	—	0.04	291
Demolition	—	—	—	0.59	0.59	—	0.09	0.09	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—

Off-Road Equipment	< 0.005	0.01	< 0.005	—	< 0.005	< 0.005	—	< 0.005	1.60
Demolition	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.26
Demolition	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.02	0.02	0.00	< 0.005	< 0.005	20.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.77	0.01	0.13	0.13	0.01	0.04	0.04	559
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.11
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.07
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.02
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.51

3.2. Demolition (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e

Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	1.18	0.01	—	0.01	0.01	—	0.01	291
Demolition	—	—	—	0.59	0.59	—	0.09	0.09	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	< 0.005	—	< 0.005	< 0.005	—	< 0.005	1.60
Demolition	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.26
Demolition	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.02	0.02	0.00	< 0.005	< 0.005	20.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.77	0.01	0.13	0.13	0.01	0.04	0.04	559
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.11
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.07

Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.02
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.51

3.3. Site Preparation (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.66	15.8	0.68	—	0.68	0.63	—	0.63	2,657
Dust From Material Movement	—	—	—	9.83	9.83	—	5.05	5.05	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	1.00	0.04	—	0.04	0.04	—	0.04	167
Dust From Material Movement	—	—	—	0.62	0.62	—	0.32	0.32	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.18	0.01	—	0.01	0.01	—	0.01	27.7
Dust From Material Movement	—	—	—	0.11	0.11	—	0.06	0.06	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	0.00	0.14	0.14	0.00	0.03	0.03	144
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	9.17
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.52
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.4. Site Preparation (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	7.37	0.05	—	0.05	0.05	—	0.05	2,657
Dust From Material Movement	—	—	—	3.83	3.83	—	1.97	1.97	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.02	0.46	< 0.005	—	< 0.005	< 0.005	—	< 0.005	167
Dust From Material Movement	—	—	—	0.24	0.24	—	0.12	0.12	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.08	< 0.005	—	< 0.005	< 0.005	—	< 0.005	27.7
Dust From Material Movement	—	—	—	0.04	0.04	—	0.02	0.02	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	0.00	0.14	0.14	0.00	0.03	0.03	144
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	9.17
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.52
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.74	16.3	0.72	—	0.72	0.66	—	0.66	2,970
Dust From Material Movement	—	—	—	7.09	7.09	—	3.43	3.43	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.71	0.03	—	0.03	0.03	—	0.03	130
Dust From Material Movement	—	—	—	0.31	0.31	—	0.15	0.15	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.13	0.01	—	0.01	0.01	—	0.01	21.6
Dust From Material Movement	—	—	—	0.06	0.06	—	0.03	0.03	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.00	0.12	0.12	0.00	0.03	0.03	123
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	1.04	0.01	0.17	0.18	0.01	0.05	0.06	749
Average Daily	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	5.47
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.04	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	32.9
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.91
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	5.44

3.6. Grading (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	10.3	0.08	—	0.08	0.08	—	0.08	2,970
Dust From Material Movement	—	—	—	2.76	2.76	—	1.34	1.34	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.45	< 0.005	—	< 0.005	< 0.005	—	< 0.005	130
Dust From Material Movement	—	—	—	0.12	0.12	—	0.06	0.06	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.08	< 0.005	—	< 0.005	< 0.005	—	< 0.005	21.6

Dust From Material Movement	—	—	—	0.02	0.02	—	0.01	0.01	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.00	0.12	0.12	0.00	0.03	0.03	123
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	1.04	0.01	0.17	0.18	0.01	0.05	0.06	749
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	5.47
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.04	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	32.9
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.91
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	5.44

3.7. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	7.24	0.30	—	0.30	0.28	—	0.28	1,536
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.80	7.24	0.30	—	0.30	0.28	—	0.28	1,536
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.28	2.52	0.11	—	0.11	0.10	—	0.10	535
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.46	0.02	—	0.02	0.02	—	0.02	88.5
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.37	0.28	0.00	0.76	0.76	0.00	0.18	0.18	812
Vendor	0.01	0.51	0.01	0.10	0.10	0.01	0.03	0.03	402
Hauling	< 0.005	0.16	< 0.005	0.03	0.03	< 0.005	0.01	0.01	119
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.36	0.37	0.00	0.76	0.76	0.00	0.18	0.18	754
Vendor	0.01	0.54	0.01	0.10	0.10	0.01	0.03	0.03	401
Hauling	< 0.005	0.16	< 0.005	0.03	0.03	< 0.005	0.01	0.01	119
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.12	0.12	0.00	0.26	0.26	0.00	0.06	0.06	265
Vendor	< 0.005	0.18	< 0.005	0.03	0.04	< 0.005	0.01	0.01	140
Hauling	< 0.005	0.06	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	41.4
Annual	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.00	0.05	0.05	0.00	0.01	0.01	43.9
Vendor	< 0.005	0.03	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	23.1
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	6.86

3.8. Building Construction (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	7.41	0.10	—	0.10	0.10	—	0.10	1,536
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	7.41	0.10	—	0.10	0.10	—	0.10	1,536
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	2.58	0.04	—	0.04	0.03	—	0.03	535
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.47	0.01	—	0.01	0.01	—	0.01	88.5
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.37	0.28	0.00	0.76	0.76	0.00	0.18	0.18	812
Vendor	0.01	0.51	0.01	0.10	0.10	0.01	0.03	0.03	402
Hauling	< 0.005	0.16	< 0.005	0.03	0.03	< 0.005	0.01	0.01	119
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.36	0.37	0.00	0.76	0.76	0.00	0.18	0.18	754

Vendor	0.01	0.54	0.01	0.10	0.10	0.01	0.03	0.03	401
Hauling	< 0.005	0.16	< 0.005	0.03	0.03	< 0.005	0.01	0.01	119
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.12	0.12	0.00	0.26	0.26	0.00	0.06	0.06	265
Vendor	< 0.005	0.18	< 0.005	0.03	0.04	< 0.005	0.01	0.01	140
Hauling	< 0.005	0.06	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	41.4
Annual	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.00	0.05	0.05	0.00	0.01	0.01	43.9
Vendor	< 0.005	0.03	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	23.1
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	6.86

3.9. Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.67	6.38	0.30	—	0.30	0.28	—	0.28	1,296
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.26	0.01	—	0.01	0.01	—	0.01	53.3
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.01	0.05	< 0.005	—	< 0.005	< 0.005	—	< 0.005	8.82
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.00	0.12	0.12	0.00	0.03	0.03	123
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.94	0.01	0.15	0.16	0.01	0.04	0.05	683
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	5.13
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.04	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	28.1
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.85
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	4.65

3.10. Paving (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	6.05	0.07	—	0.07	0.06	—	0.06	1,296

Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.25	< 0.005	—	< 0.005	< 0.005	—	< 0.005	53.3
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.05	< 0.005	—	< 0.005	< 0.005	—	< 0.005	8.82
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.00	0.12	0.12	0.00	0.03	0.03	123
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.94	0.01	0.15	0.16	0.01	0.04	0.05	683
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	5.13
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.04	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	28.1
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.85
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	4.65

3.11. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.88	0.03	—	0.03	0.03	—	0.03	134
Architectural Coatings	106	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.88	0.03	—	0.03	0.03	—	0.03	134
Architectural Coatings	106	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.05	< 0.005	—	< 0.005	< 0.005	—	< 0.005	6.97
Architectural Coatings	5.53	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	< 0.005	—	< 0.005	< 0.005	—	< 0.005	1.15
Architectural Coatings	1.01	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.00	0.15	0.15	0.00	0.04	0.04	162
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	0.00	0.15	0.15	0.00	0.04	0.04	151
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	7.93
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.31
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Architectural Coating (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.03	—	0.03	0.03	—	0.03	134
Architectural Coatings	106	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.03	—	0.03	0.03	—	0.03	134
Architectural Coatings	106	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.06	< 0.005	—	< 0.005	< 0.005	—	< 0.005	6.97
Architectural Coatings	5.53	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	< 0.005	—	< 0.005	< 0.005	—	< 0.005	1.15
Architectural Coatings	1.01	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.00	0.15	0.15	0.00	0.04	0.04	162
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	0.00	0.15	0.15	0.00	0.04	0.04	151
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	7.93

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.31
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Trenching (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	1.93	0.07	—	0.07	0.06	—	0.06	434
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	< 0.005	—	< 0.005	< 0.005	—	< 0.005	15.4
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	< 0.005	—	< 0.005	< 0.005	—	< 0.005	2.56
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—

Worker	0.02	0.02	0.00	0.04	0.04	0.00	0.01	0.01	41.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.48
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.25
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.14. Trenching (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	2.28	0.04	—	0.04	0.03	—	0.03	434
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.08	< 0.005	—	< 0.005	< 0.005	—	< 0.005	15.4
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	< 0.005	—	< 0.005	< 0.005	—	< 0.005	2.56

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.00	0.04	0.04	0.00	0.01	0.01	41.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.48
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.25
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	2.28	1.89	0.03	2.91	2.94	0.03	0.74	0.77	3,497

Fast Food Restaurant w/o Drive Thru	5.63	4.99	0.08	7.90	7.98	0.08	2.01	2.09	9,461
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	7.91	6.88	0.11	10.8	10.9	0.11	2.75	2.86	12,958
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	2.18	2.17	0.03	2.91	2.94	0.03	0.74	0.77	3,324
Fast Food Restaurant w/o Drive Thru	5.38	5.73	0.08	7.90	7.98	0.08	2.01	2.09	8,989
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	7.56	7.91	0.11	10.8	10.9	0.11	2.75	2.86	12,313
Annual	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.37	0.36	0.01	0.50	0.51	0.01	0.13	0.13	526
Fast Food Restaurant w/o Drive Thru	0.58	0.60	0.01	0.86	0.87	0.01	0.22	0.23	900
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.96	0.96	0.01	1.36	1.38	0.01	0.35	0.36	1,426

4.1.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	2.28	1.89	0.03	2.91	2.94	0.03	0.74	0.77	3,497
Fast Food Restaurant w/o Drive Thru	5.63	4.99	0.08	7.90	7.98	0.08	2.01	2.09	9,461

Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	7.91	6.88	0.11	10.8	10.9	0.11	2.75	2.86	12,958
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	2.18	2.17	0.03	2.91	2.94	0.03	0.74	0.77	3,324
Fast Food Restaurant w/o Drive Thru	5.38	5.73	0.08	7.90	7.98	0.08	2.01	2.09	8,989
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	7.56	7.91	0.11	10.8	10.9	0.11	2.75	2.86	12,313
Annual	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.37	0.36	0.01	0.50	0.51	0.01	0.13	0.13	526
Fast Food Restaurant w/o Drive Thru	0.58	0.60	0.01	0.86	0.87	0.01	0.22	0.23	900
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.96	0.96	0.01	1.36	1.38	0.01	0.35	0.36	1,426

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	92.8
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	21.2

Parking Lot	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	114
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	92.8
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	21.2
Parking Lot	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	114
Annual	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	15.4
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	3.51
Parking Lot	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	18.9

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	92.8
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	21.2
Parking Lot	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	114

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	92.8
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	21.2
Parking Lot	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	114
Annual	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	15.4
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	3.51
Parking Lot	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	18.9

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Fast Food Restaurant w/o Drive Thru	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Parking Lot	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—

Apartments Mid Rise	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Fast Food Restaurant w/o Drive Thru	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Parking Lot	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Fast Food Restaurant w/o Drive Thru	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Parking Lot	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Fast Food Restaurant w/o Drive Thru	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Parking Lot	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00

Fast Food Restaurant w/o Drive Thru	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Parking Lot	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Fast Food Restaurant w/o Drive Thru	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Parking Lot	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Consumer Products	3.08	—	—	—	—	—	—	—	—
Architectural Coatings	0.55	—	—	—	—	—	—	—	—
Landscape Equipment	0.65	0.07	< 0.005	—	< 0.005	< 0.005	—	< 0.005	19.6
Total	4.28	0.07	< 0.005	—	< 0.005	< 0.005	—	< 0.005	19.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00

Consumer Products	3.08	—	—	—	—	—	—	—	—
Architectural Coatings	0.55	—	—	—	—	—	—	—	—
Total	3.63	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Consumer Products	0.56	—	—	—	—	—	—	—	—
Architectural Coatings	0.10	—	—	—	—	—	—	—	—
Landscape Equipment	0.06	0.01	< 0.005	—	< 0.005	< 0.005	—	< 0.005	1.60
Total	0.72	0.01	< 0.005	—	< 0.005	< 0.005	—	< 0.005	1.60

4.3.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Consumer Products	3.08	—	—	—	—	—	—	—	—
Architectural Coatings	0.55	—	—	—	—	—	—	—	—
Landscape Equipment	0.65	0.07	< 0.005	—	< 0.005	< 0.005	—	< 0.005	19.6
Total	4.28	0.07	< 0.005	—	< 0.005	< 0.005	—	< 0.005	19.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00

Consumer Products	3.08	—	—	—	—	—	—	—	—
Architectural Coatings	0.55	—	—	—	—	—	—	—	—
Total	3.63	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Consumer Products	0.56	—	—	—	—	—	—	—	—
Architectural Coatings	0.10	—	—	—	—	—	—	—	—
Landscape Equipment	0.06	0.01	< 0.005	—	< 0.005	< 0.005	—	< 0.005	1.60
Total	0.72	0.01	< 0.005	—	< 0.005	< 0.005	—	< 0.005	1.60

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	17.2
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	2.88
Parking Lot	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	20.1
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—

Apartments Mid Rise	—	—	—	—	—	—	—	—	17.2
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	2.88
Parking Lot	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	20.1
Annual	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	2.85
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	0.48
Parking Lot	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	3.33

4.4.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	17.2
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	2.88
Parking Lot	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	20.1
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	17.2

Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	2.88
Parking Lot	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	20.1
Annual	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	2.85
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	0.48
Parking Lot	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	3.33

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	176
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	48.9
Parking Lot	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	225
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	176

Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	48.9
Parking Lot	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	225
Annual	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	29.1
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	8.09
Parking Lot	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	37.2

4.5.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	176
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	48.9
Parking Lot	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	225
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	176
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	48.9

Parking Lot	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	225
Annual	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	29.1
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	8.09
Parking Lot	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	37.2

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	1.01
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	3.52
Total	—	—	—	—	—	—	—	—	4.53
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	1.01
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	3.52
Total	—	—	—	—	—	—	—	—	4.53

Annual	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	0.17
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	0.58
Total	—	—	—	—	—	—	—	—	0.75

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	1.01
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	3.52
Total	—	—	—	—	—	—	—	—	4.53
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	1.01
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	3.52
Total	—	—	—	—	—	—	—	—	4.53
Annual	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	0.17
Fast Food Restaurant w/o Drive Thru	—	—	—	—	—	—	—	—	0.58

Total	—	—	—	—	—	—	—	—	0.75

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—

Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	1/5/2025	1/7/2025	5.00	2.00	—
Site Preparation	Site Preparation	1/8/2025	2/9/2025	5.00	23.0	—
Grading	Grading	2/10/2025	3/3/2025	5.00	16.0	—
Building Construction	Building Construction	3/21/2025	9/15/2025	5.00	127	—
Paving	Paving	10/11/2025	11/1/2025	5.00	15.0	—
Architectural Coating	Architectural Coating	9/16/2025	10/10/2025	5.00	19.0	—
Trenching	Trenching	3/4/2025	3/20/2025	5.00	13.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	4.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	4.00	84.0	0.37
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	6.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	6.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
Trenching	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Trenching	Excavators	Diesel	Average	1.00	8.00	36.0	0.38

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	1.00	8.00	84.0	0.37

Site Preparation	Rubber Tired Dozers	Diesel	Tier 4 Interim	3.00	4.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	4.00	4.00	84.0	0.37
Grading	Excavators	Diesel	Tier 4 Interim	1.00	8.00	36.0	0.38
Grading	Graders	Diesel	Tier 4 Interim	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Tier 4 Interim	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	3.00	8.00	84.0	0.37
Building Construction	Forklifts	Diesel	Tier 4 Interim	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Tier 4 Interim	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Tier 4 Interim	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Tier 4 Interim	2.00	6.00	89.0	0.36
Paving	Rollers	Diesel	Tier 4 Interim	2.00	6.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Tier 4 Interim	1.00	6.00	37.0	0.48
Trenching	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	1.00	8.00	84.0	0.37
Trenching	Excavators	Diesel	Tier 4 Interim	1.00	8.00	36.0	0.38

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	2.50	11.7	LDA,LDT1,LDT2
Demolition	Vendor	—	8.40	HHDT,MHDT
Demolition	Hauling	7.00	20.0	HHDT

Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	11.7	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.40	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	15.0	11.7	LDA,LDT1,LDT2
Grading	Vendor	—	8.40	HHDT,MHDT
Grading	Hauling	9.38	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	91.7	11.7	LDA,LDT1,LDT2
Building Construction	Vendor	13.8	8.40	HHDT,MHDT
Building Construction	Hauling	1.49	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	11.7	LDA,LDT1,LDT2
Paving	Vendor	—	8.40	HHDT,MHDT
Paving	Hauling	8.55	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	18.3	11.7	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.40	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Trenching	—	—	—	—

Trenching	Worker	5.00	11.7	LDA,LDT1,LDT2
Trenching	Vendor	—	8.40	HHDT,MHDT
Trenching	Hauling	0.00	20.0	HHDT
Trenching	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	2.50	11.7	LDA,LDT1,LDT2
Demolition	Vendor	—	8.40	HHDT,MHDT
Demolition	Hauling	7.00	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	11.7	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.40	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	15.0	11.7	LDA,LDT1,LDT2
Grading	Vendor	—	8.40	HHDT,MHDT
Grading	Hauling	9.38	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	91.7	11.7	LDA,LDT1,LDT2
Building Construction	Vendor	13.8	8.40	HHDT,MHDT
Building Construction	Hauling	1.49	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT

Paving	—	—	—	—
Paving	Worker	15.0	11.7	LDA,LDT1,LDT2
Paving	Vendor	—	8.40	HHDT,MHDT
Paving	Hauling	8.55	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	18.3	11.7	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.40	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Trenching	—	—	—	—
Trenching	Worker	5.00	11.7	LDA,LDT1,LDT2
Trenching	Vendor	—	8.40	HHDT,MHDT
Trenching	Hauling	0.00	20.0	HHDT
Trenching	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	286,902	95,634	3,375	1,125	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	1,200	—
Site Preparation	—	—	17.3	0.00	—
Grading	1,200	—	16.0	0.00	—
Paving	0.00	0.00	0.00	0.00	0.00

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Apartments Mid Rise	—	0%
Fast Food Restaurant w/o Drive Thru	0.00	0%
Parking Lot	0.00	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	39.5	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments Mid Rise	538	486	404	186,675	4,078	3,680	3,066	1,414,901

Fast Food Restaurant w/o Drive Thru	642	1,291	927	283,015	5,507	11,070	7,952	2,427,569
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments Mid Rise	538	486	404	186,675	4,078	3,680	3,066	1,414,901
Fast Food Restaurant w/o Drive Thru	642	1,291	927	283,015	5,507	11,070	7,952	2,427,569
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	0
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.1.2. Mitigated

Hearth Type	Unmitigated (number)
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	0
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
286902	95,634	3,375	1,125	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00

Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Mid Rise	817,023	39.5	0.0330	0.0040	0.00
Fast Food Restaurant w/o Drive Thru	186,323	39.5	0.0330	0.0040	0.00
Parking Lot	0.00	39.5	0.0330	0.0040	0.00

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Mid Rise	817,023	39.5	0.0330	0.0040	0.00
Fast Food Restaurant w/o Drive Thru	186,323	39.5	0.0330	0.0040	0.00
Parking Lot	0.00	39.5	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	4,061,837	266,080
Fast Food Restaurant w/o Drive Thru	682,951	0.00
Parking Lot	0.00	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	4,061,837	266,080
Fast Food Restaurant w/o Drive Thru	682,951	0.00
Parking Lot	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	93.3	—
Fast Food Restaurant w/o Drive Thru	25.9	—
Parking Lot	0.00	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	93.3	—
Fast Food Restaurant w/o Drive Thru	25.9	—
Parking Lot	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0

Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Fast Food Restaurant w/o Drive Thru	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Fast Food Restaurant w/o Drive Thru	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
Fast Food Restaurant w/o Drive Thru	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Fast Food Restaurant w/o Drive Thru	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Fast Food Restaurant w/o Drive Thru	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
Fast Food Restaurant w/o Drive Thru	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	11.1	annual days of extreme heat
Extreme Precipitation	11.6	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	9.76	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A

Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	7.52
AQ-PM	9.31
AQ-DPM	29.2
Drinking Water	50.3
Lead Risk Housing	37.7
Pesticides	54.5
Toxic Releases	12.8
Traffic	59.6
Effect Indicators	—
CleanUp Sites	63.7
Groundwater	83.3
Haz Waste Facilities/Generators	80.3
Impaired Water Bodies	77.3
Solid Waste	88.9

Sensitive Population	—
Asthma	24.4
Cardio-vascular	15.3
Low Birth Weights	26.1
Socioeconomic Factor Indicators	—
Education	48.6
Housing	83.9
Linguistic	8.49
Poverty	57.6
Unemployment	25.2

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	46.47760811
Employed	43.98819453
Median HI	38.23944566
Education	—
Bachelor's or higher	59.98973438
High school enrollment	100
Preschool enrollment	28.89772873
Transportation	—
Auto Access	75.69613756
Active commuting	42.15321442
Social	—
2-parent households	8.469138971

Voting	86.56486591
Neighborhood	—
Alcohol availability	42.71782369
Park access	7.019119723
Retail density	28.16630309
Supermarket access	43.11561658
Tree canopy	66.18760426
Housing	—
Homeownership	53.27858334
Housing habitability	49.89092776
Low-inc homeowner severe housing cost burden	38.29077377
Low-inc renter severe housing cost burden	31.695111
Uncrowded housing	67.80443988
Health Outcomes	—
Insured adults	68.56152958
Arthritis	0.0
Asthma ER Admissions	65.8
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	25.4
Cognitively Disabled	9.0
Physically Disabled	59.0
Heart Attack ER Admissions	83.1

Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	74.2
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	59.5
Elderly	36.8
English Speaking	70.1
Foreign-born	31.6
Outdoor Workers	56.3
Climate Change Adaptive Capacity	—
Impervious Surface Cover	82.2
Traffic Density	66.8
Traffic Access	47.9
Other Indices	—
Hardship	44.4
Other Decision Support	—
2016 Voting	86.7

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	38.0
Healthy Places Index Score for Project Location (b)	48.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Characteristics: Utility Information	Characteristics: Utility Information Sonoma Clean Power is the default clean energy provider for Cotati.
Land Use	Applicant provided land uses in provided construction worksheet. Restaurant land use used as closest CalEEMod land use to Coffee/Donut Shop use.
Construction: Construction Phases	Construction Schedule provided by project applicant.
Construction: Off-Road Equipment	Default construction equipment/hours provided and revised by the applicant.
Construction: Trips and VMT	Building construction = 90 cement truck round trips (1.49 trips/day), Paving = 499-cy asphalt hauling (8.55 trips/day).
Operations: Vehicle Data	Provided trip generation with internal capture and diverted reductions.

Operations: Hearths	No hearths.
Operations: Energy Use	Applicant confirmed project would be all-electric. Natural gas converted to electricity.
Operations: Water and Waste Water	Wastewater treatment 100% aerobic. No septic tanks or lagoons.

24-049 Cotati Village #2 BMPs T4i HRA Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

1.2. Land Use Types

1.3. User-Selected Emission Reduction Measures by Emissions Sector

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

2.2. Construction Emissions by Year, Unmitigated

2.3. Construction Emissions by Year, Mitigated

3. Construction Emissions Details

3.1. Demolition (2025) - Unmitigated

3.2. Demolition (2025) - Mitigated

3.3. Site Preparation (2025) - Unmitigated

3.4. Site Preparation (2025) - Mitigated

3.5. Grading (2025) - Unmitigated

3.6. Grading (2025) - Mitigated

3.7. Building Construction (2025) - Unmitigated

3.8. Building Construction (2025) - Mitigated

3.9. Paving (2025) - Unmitigated

3.10. Paving (2025) - Mitigated

3.11. Architectural Coating (2025) - Unmitigated

3.12. Architectural Coating (2025) - Mitigated

3.13. Trenching (2025) - Unmitigated

3.14. Trenching (2025) - Mitigated

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.2.2. Mitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.3.2. Mitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1.2. Mitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.1.2. Mitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

5.18.2.2. Mitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	24-049 Cotati Village #2 BMPs T4i HRA
Construction Start Date	1/5/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.20
Precipitation (days)	9.60
Location	7515 Alder Ave, Cotati, CA 94931, USA
County	Sonoma-San Francisco
City	Cotati
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	972
EDFZ	2
Electric Utility	Sonoma Clean Power
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.23

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Apartments Mid Rise	126	Dwelling Unit	4.00	141,680	24,302	0.00	323	—

Fast Food Restaurant w/o Drive Thru	2.25	1000sqft	0.00	2,250	0.00	—	—	—
Parking Lot	168	Space	0.00	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers
Construction	C-10-A	Water Exposed Surfaces
Construction	C-11	Limit Vehicle Speeds on Unpaved Roads

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Unmit.	106	7.50	0.30	0.04	0.34	0.28	0.01	0.29	1,632
Mit.	106	7.67	0.10	0.04	0.14	0.10	0.01	0.11	1,632
% Reduced	< 0.5%	-2%	66%	—	58%	65%	—	63%	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Unmit.	106	16.4	0.72	9.83	10.5	0.66	5.05	5.68	3,011
Mit.	106	10.4	0.10	3.84	3.89	0.10	1.97	2.02	3,011
% Reduced	< 0.5%	36%	86%	61%	63%	85%	61%	64%	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—
Unmit.	6.15	4.72	0.20	0.95	1.14	0.18	0.47	0.65	947

Mit.	5.81	4.00	0.05	0.38	0.43	0.05	0.19	0.23	947
% Reduced	6%	15%	75%	60%	62%	75%	60%	64%	—
Annual (Max)	—	—	—	—	—	—	—	—	—
Unmit.	1.12	0.86	0.04	0.17	0.21	0.03	0.09	0.12	157
Mit.	1.06	0.73	0.01	0.07	0.08	0.01	0.03	0.04	157
% Reduced	6%	15%	75%	60%	62%	75%	60%	64%	—

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—
2025	106	7.50	0.30	0.04	0.34	0.28	0.01	0.29	1,632
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—
2025	106	16.4	0.72	9.83	10.5	0.66	5.05	5.68	3,011
Average Daily	—	—	—	—	—	—	—	—	—
2025	6.15	4.72	0.20	0.95	1.14	0.18	0.47	0.65	947
Annual	—	—	—	—	—	—	—	—	—
2025	1.12	0.86	0.04	0.17	0.21	0.03	0.09	0.12	157

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—
2025	106	7.67	0.10	0.04	0.14	0.10	0.01	0.11	1,632

Daily - Winter (Max)	—	—	—	—	—	—	—	—	—
2025	106	10.4	0.10	3.84	3.89	0.10	1.97	2.02	3,011
Average Daily	—	—	—	—	—	—	—	—	—
2025	5.81	4.00	0.05	0.38	0.43	0.05	0.19	0.23	947
Annual	—	—	—	—	—	—	—	—	—
2025	1.06	0.73	0.01	0.07	0.08	0.01	0.03	0.04	157

3. Construction Emissions Details

3.1. Demolition (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	1.10	0.04	—	0.04	0.04	—	0.04	291
Demolition	—	—	—	0.59	0.59	—	0.09	0.09	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	< 0.005	—	< 0.005	< 0.005	—	< 0.005	1.60
Demolition	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.26

Demolition	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.40
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.12	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	24.7
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.01
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.14
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	< 0.005
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02

3.2. Demolition (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	1.18	0.01	—	0.01	0.01	—	0.01	291
Demolition	—	—	—	0.59	0.59	—	0.09	0.09	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	< 0.005	—	< 0.005	< 0.005	—	< 0.005	1.60
Demolition	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.26
Demolition	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.40
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.12	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	24.7
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.01
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.14
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	< 0.005
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02

3.3. Site Preparation (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.66	15.8	0.68	—	0.68	0.63	—	0.63	2,657
Dust From Material Movement	—	—	—	9.83	9.83	—	5.05	5.05	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	1.00	0.04	—	0.04	0.04	—	0.04	167
Dust From Material Movement	—	—	—	0.62	0.62	—	0.32	0.32	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.18	0.01	—	0.01	0.01	—	0.01	27.7
Dust From Material Movement	—	—	—	0.11	0.11	—	0.06	0.06	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.06	0.02	0.00	0.01	0.01	0.00	< 0.005	< 0.005	9.82
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.62
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.10
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.4. Site Preparation (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	7.37	0.05	—	0.05	0.05	—	0.05	2,657
Dust From Material Movement	—	—	—	3.83	3.83	—	1.97	1.97	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.46	< 0.005	—	< 0.005	< 0.005	—	< 0.005	167
Dust From Material Movement	—	—	—	0.24	0.24	—	0.12	0.12	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.08	< 0.005	—	< 0.005	< 0.005	—	< 0.005	27.7

Dust From Material Movement	—	—	—	0.04	0.04	—	0.02	0.02	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.06	0.02	0.00	0.01	0.01	0.00	< 0.005	< 0.005	9.82
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.62
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.10
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.74	16.3	0.72	—	0.72	0.66	—	0.66	2,970

Dust From Material Movement	—	—	—	7.09	7.09	—	3.43	3.43	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.71	0.03	—	0.03	0.03	—	0.03	130
Dust From Material Movement	—	—	—	0.31	0.31	—	0.15	0.15	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.13	0.01	—	0.01	0.01	—	0.01	21.6
Dust From Material Movement	—	—	—	0.06	0.06	—	0.03	0.03	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.05	0.02	0.00	0.01	0.01	0.00	< 0.005	< 0.005	8.42
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.16	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	33.1
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.37
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.45
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.06
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.24

3.6. Grading (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	10.3	0.08	—	0.08	0.08	—	0.08	2,970
Dust From Material Movement	—	—	—	2.76	2.76	—	1.34	1.34	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.45	< 0.005	—	< 0.005	< 0.005	—	< 0.005	130
Dust From Material Movement	—	—	—	0.12	0.12	—	0.06	0.06	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.08	< 0.005	—	< 0.005	< 0.005	—	< 0.005	21.6
Dust From Material Movement	—	—	—	0.02	0.02	—	0.01	0.01	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.05	0.02	0.00	0.01	0.01	0.00	< 0.005	< 0.005	8.42
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	< 0.005	0.16	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	33.1
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.37
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.45
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.06
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.24

3.7. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	7.24	0.30	—	0.30	0.28	—	0.28	1,536
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	7.24	0.30	—	0.30	0.28	—	0.28	1,536
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.28	2.52	0.11	—	0.11	0.10	—	0.10	535
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.05	0.46	0.02	—	0.02	0.02	—	0.02	88.5
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.33	0.08	0.00	0.03	0.03	0.00	0.01	0.01	53.1
Vendor	0.01	0.16	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	37.0
Hauling	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	5.24
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.31	0.09	0.00	0.03	0.03	0.00	0.01	0.01	51.4
Vendor	0.01	0.16	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	37.0
Hauling	< 0.005	0.03	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	5.25
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.11	0.03	0.00	0.01	0.01	0.00	< 0.005	< 0.005	17.9
Vendor	< 0.005	0.06	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	12.9
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.83
Annual	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	2.96
Vendor	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	2.13
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.30

3.8. Building Construction (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.32	7.41	0.10	—	0.10	0.10	—	0.10	1,536
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	7.41	0.10	—	0.10	0.10	—	0.10	1,536
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	2.58	0.04	—	0.04	0.03	—	0.03	535
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.47	0.01	—	0.01	0.01	—	0.01	88.5
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.33	0.08	0.00	0.03	0.03	0.00	0.01	0.01	53.1
Vendor	0.01	0.16	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	37.0
Hauling	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	5.24
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.31	0.09	0.00	0.03	0.03	0.00	0.01	0.01	51.4
Vendor	0.01	0.16	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	37.0
Hauling	< 0.005	0.03	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	5.25
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.11	0.03	0.00	0.01	0.01	0.00	< 0.005	< 0.005	17.9
Vendor	< 0.005	0.06	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	12.9
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.83

Annual	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	2.96
Vendor	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	2.13
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.30

3.9. Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.67	6.38	0.30	—	0.30	0.28	—	0.28	1,296
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.26	0.01	—	0.01	0.01	—	0.01	53.3
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.05	< 0.005	—	< 0.005	< 0.005	—	< 0.005	8.82
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.05	0.02	0.00	0.01	0.01	0.00	< 0.005	< 0.005	8.42
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.14	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	30.1
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.35
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.24
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.06
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.20

3.10. Paving (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	6.05	0.07	—	0.07	0.06	—	0.06	1,296
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.25	< 0.005	—	< 0.005	< 0.005	—	< 0.005	53.3
Paving	0.00	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.05	< 0.005	—	< 0.005	< 0.005	—	< 0.005	8.82
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.05	0.02	0.00	0.01	0.01	0.00	< 0.005	< 0.005	8.42
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.14	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	30.1
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.35
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.24
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.06
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.20

3.11. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.13	0.88	0.03	—	0.03	0.03	—	0.03	134
Architectural Coatings	106	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.88	0.03	—	0.03	0.03	—	0.03	134
Architectural Coatings	106	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.05	< 0.005	—	< 0.005	< 0.005	—	< 0.005	6.97
Architectural Coatings	5.53	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	< 0.005	—	< 0.005	< 0.005	—	< 0.005	1.15
Architectural Coatings	1.01	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.07	0.02	0.00	0.01	0.01	0.00	< 0.005	< 0.005	10.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.06	0.02	0.00	0.01	0.01	0.00	< 0.005	< 0.005	10.3

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.54
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.09
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Architectural Coating (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.03	—	0.03	0.03	—	0.03	134
Architectural Coatings	106	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	1.07	0.03	—	0.03	0.03	—	0.03	134
Architectural Coatings	106	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—

Off-Road Equipment	< 0.005	0.06	< 0.005	—	< 0.005	< 0.005	—	< 0.005	6.97
Architectural Coatings	5.53	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	< 0.005	—	< 0.005	< 0.005	—	< 0.005	1.15
Architectural Coatings	1.01	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.07	0.02	0.00	0.01	0.01	0.00	< 0.005	< 0.005	10.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.06	0.02	0.00	0.01	0.01	0.00	< 0.005	< 0.005	10.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.54
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.09
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Trenching (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	1.93	0.07	—	0.07	0.06	—	0.06	434
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	< 0.005	—	< 0.005	< 0.005	—	< 0.005	15.4
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	< 0.005	—	< 0.005	< 0.005	—	< 0.005	2.56
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	2.81
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.10
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.02
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.14. Trenching (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	2.28	0.04	—	0.04	0.03	—	0.03	434
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.08	< 0.005	—	< 0.005	< 0.005	—	< 0.005	15.4
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	< 0.005	—	< 0.005	< 0.005	—	< 0.005	2.56
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	2.81
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.10
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.02
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	1/5/2025	1/7/2025	5.00	2.00	—
Site Preparation	Site Preparation	1/8/2025	2/9/2025	5.00	23.0	—
Grading	Grading	2/10/2025	3/3/2025	5.00	16.0	—
Building Construction	Building Construction	3/21/2025	9/15/2025	5.00	127	—
Paving	Paving	10/11/2025	11/1/2025	5.00	15.0	—
Architectural Coating	Architectural Coating	9/16/2025	10/10/2025	5.00	19.0	—
Trenching	Trenching	3/4/2025	3/20/2025	5.00	13.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	4.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	4.00	84.0	0.37
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41

Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	6.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	6.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
Trenching	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Trenching	Excavators	Diesel	Average	1.00	8.00	36.0	0.38

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	1.00	8.00	84.0	0.37
Site Preparation	Rubber Tired Dozers	Diesel	Tier 4 Interim	3.00	4.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	4.00	4.00	84.0	0.37
Grading	Excavators	Diesel	Tier 4 Interim	1.00	8.00	36.0	0.38
Grading	Graders	Diesel	Tier 4 Interim	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Tier 4 Interim	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	3.00	8.00	84.0	0.37
Building Construction	Forklifts	Diesel	Tier 4 Interim	3.00	8.00	82.0	0.20

Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Tier 4 Interim	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Tier 4 Interim	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Tier 4 Interim	2.00	6.00	89.0	0.36
Paving	Rollers	Diesel	Tier 4 Interim	2.00	6.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Tier 4 Interim	1.00	6.00	37.0	0.48
Trenching	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	1.00	8.00	84.0	0.37
Trenching	Excavators	Diesel	Tier 4 Interim	1.00	8.00	36.0	0.38

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	2.50	0.50	LDA,LDT1,LDT2
Demolition	Vendor	—	0.50	HHDT,MHDT
Demolition	Hauling	7.00	0.50	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	0.50	LDA,LDT1,LDT2
Site Preparation	Vendor	—	0.50	HHDT,MHDT
Site Preparation	Hauling	0.00	0.50	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	15.0	0.50	LDA,LDT1,LDT2

Grading	Vendor	—	0.50	HHDT,MHDT
Grading	Hauling	9.38	0.50	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	91.7	0.50	LDA,LDT1,LDT2
Building Construction	Vendor	13.8	0.50	HHDT,MHDT
Building Construction	Hauling	1.49	0.50	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	0.50	LDA,LDT1,LDT2
Paving	Vendor	—	0.50	HHDT,MHDT
Paving	Hauling	8.55	0.50	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	18.3	0.50	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	0.50	HHDT,MHDT
Architectural Coating	Hauling	0.00	0.50	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Trenching	—	—	—	—
Trenching	Worker	5.00	0.50	LDA,LDT1,LDT2
Trenching	Vendor	—	0.50	HHDT,MHDT
Trenching	Hauling	0.00	0.50	HHDT
Trenching	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—

Demolition	Worker	2.50	0.50	LDA,LDT1,LDT2
Demolition	Vendor	—	0.50	HHDT,MHDT
Demolition	Hauling	7.00	0.50	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	0.50	LDA,LDT1,LDT2
Site Preparation	Vendor	—	0.50	HHDT,MHDT
Site Preparation	Hauling	0.00	0.50	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	15.0	0.50	LDA,LDT1,LDT2
Grading	Vendor	—	0.50	HHDT,MHDT
Grading	Hauling	9.38	0.50	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	91.7	0.50	LDA,LDT1,LDT2
Building Construction	Vendor	13.8	0.50	HHDT,MHDT
Building Construction	Hauling	1.49	0.50	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	0.50	LDA,LDT1,LDT2
Paving	Vendor	—	0.50	HHDT,MHDT
Paving	Hauling	8.55	0.50	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	18.3	0.50	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	0.50	HHDT,MHDT

Architectural Coating	Hauling	0.00	0.50	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Trenching	—	—	—	—
Trenching	Worker	5.00	0.50	LDA,LDT1,LDT2
Trenching	Vendor	—	0.50	HHDT,MHDT
Trenching	Hauling	0.00	0.50	HHDT
Trenching	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	286,902	95,634	3,375	1,125	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	1,200	—
Site Preparation	—	—	17.3	0.00	—
Grading	1,200	—	16.0	0.00	—
Paving	0.00	0.00	0.00	0.00	0.00

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Apartments Mid Rise	—	0%
Fast Food Restaurant w/o Drive Thru	0.00	0%
Parking Lot	0.00	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	39.5	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	11.1	annual days of extreme heat
Extreme Precipitation	11.6	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	9.76	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A

Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	7.52
AQ-PM	9.31
AQ-DPM	29.2
Drinking Water	50.3
Lead Risk Housing	37.7
Pesticides	54.5
Toxic Releases	12.8
Traffic	59.6
Effect Indicators	—
CleanUp Sites	63.7
Groundwater	83.3
Haz Waste Facilities/Generators	80.3
Impaired Water Bodies	77.3

Solid Waste	88.9
Sensitive Population	—
Asthma	24.4
Cardio-vascular	15.3
Low Birth Weights	26.1
Socioeconomic Factor Indicators	—
Education	48.6
Housing	83.9
Linguistic	8.49
Poverty	57.6
Unemployment	25.2

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	46.47760811
Employed	43.98819453
Median HI	38.23944566
Education	—
Bachelor's or higher	59.98973438
High school enrollment	100
Preschool enrollment	28.89772873
Transportation	—
Auto Access	75.69613756
Active commuting	42.15321442
Social	—

2-parent households	8.469138971
Voting	86.56486591
Neighborhood	—
Alcohol availability	42.71782369
Park access	7.019119723
Retail density	28.16630309
Supermarket access	43.11561658
Tree canopy	66.18760426
Housing	—
Homeownership	53.27858334
Housing habitability	49.89092776
Low-inc homeowner severe housing cost burden	38.29077377
Low-inc renter severe housing cost burden	31.695111
Uncrowded housing	67.80443988
Health Outcomes	—
Insured adults	68.56152958
Arthritis	0.0
Asthma ER Admissions	65.8
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	25.4
Cognitively Disabled	9.0
Physically Disabled	59.0

Heart Attack ER Admissions	83.1
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	74.2
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	59.5
Elderly	36.8
English Speaking	70.1
Foreign-born	31.6
Outdoor Workers	56.3
Climate Change Adaptive Capacity	—
Impervious Surface Cover	82.2
Traffic Density	66.8
Traffic Access	47.9
Other Indices	—
Hardship	44.4
Other Decision Support	—
2016 Voting	86.7

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	38.0
Healthy Places Index Score for Project Location (b)	48.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Characteristics: Utility Information	Characteristics: Utility Information Sonoma Clean Power is the default clean energy provider for Cotati.
Land Use	Applicant provided land uses in provided construction worksheet. Restaurant land use used as closest CalEEMod land use to Coffee/Donut Shop use.
Construction: Construction Phases	Construction Schedule provided by project applicant.
Construction: Off-Road Equipment	Default construction equipment/hours provided and revised by the applicant.
Construction: Trips and VMT	Building construction = 90 cement truck round trips (1.49 trips/day), Paving = 499-cy asphalt hauling (8.55 trips/day). HRA = 0.5 mile trip length for localized emissions.
Operations: Vehicle Data	Provided trip generation with internal capture and diverted reductions.

Operations: Hearths	No hearths.
Operations: Energy Use	Applicant confirmed project would be all-electric. Natural gas converted to electricity.
Operations: Water and Waste Water	Wastewater treatment 100% aerobic. No septic tanks or lagoons.

Attachment 2: Project Construction Emissions and Health Risk Calculations

Cotati Village 2 - Cotati, CA
Construction Emissions

Unmitigated Construction Emissions		
Unmitigated	PM10 Exhaust	PM2.5 Fugitive
Year		
Construction Equipment		
2025	0.0358	0.0862
Tons	0.04	0.09

Mitigated Construction Emissions		
Mitigated	PM10 Exhaust	PM2.5 Fugitive
Year		
Construction Equipment		
2025	0.0088	0.0341
Tons	0.009	0.03

Cotati Village 2 - Cotati, CA

DPM Emissions and Modeling Emission Rates - Uncontrolled

Emissions Model Year	Activity	DPM (ton/year)	Area Source	DPM Emissions (lb/yr)	DPM Emissions (lb/hr)	DPM Emissions (g/s)	Modeled Area (m^2)	DPM Emission Rate ($g/s/m^2$)
2025	Construction	0.0358	DPM	71.7	0.01637	2.06E-03	15,317	**1.35E-07**

Modeled Operation Hours

hr/day =	12	(7am - 7pm)
days/yr =	365	
hours/year =	4380	

PM2.5 Fugitive Dust Emissions for Modeling - Uncontrolled

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	PM2.5 Emissions (lb/yr)	PM2.5 Emissions (lb/hr)	PM2.5 Emissions (g/s)	Modeled Area (m^2)	PM2.5 Emission Rate $g/s/m^2$
2025	Construction	FUG	0.0862	172.5	0.03938	4.96E-03	15,317	**3.24E-07**

Modeled Operation Hours

hr/day =	12	(7am - 7pm)
days/yr =	365	
hours/year =	4380	

Cotati Village - Cotati, CA
DPM Construction Emissions and Modeling Emission Rates - With Controls

Emissions Model Year	Activity	DPM (ton/year)	Area Source	DPM Emissions (lb/yr)	DPM Emissions (lb/hr)	DPM Emissions (g/s)	Modeled Area (m^2)	DPM Emission Rate ($g/s/m^2$)
2025	Construction	0.0088	DPM	17.7	0.00404	5.09E-04	15,317	**3.32E-08**

Modeled Operation Hours

hr/day =	12	(7am - 7pm)
days/yr =	365	
hours/year =	4380	

PM2.5 Fugitive Dust Construction Emissions for Modeling - With Controls

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	PM2.5 Emissions (lb/yr)	PM2.5 Emissions (lb/hr)	PM2.5 Emissions (g/s)	Modeled Area (m^2)	PM2.5 Emission Rate $g/s/m^2$
2025	Construction	FUG	0.0341	68.2	0.01557	1.96E-03	15,317	**1.28E-07**

Modeled Operation Hours

hr/day =	12	(7am - 7pm)
days/yr =	365	
hours/year =	4380	

Cotati Village 2 - Cotati, CA
Construction Health Impacts Summary

Maximum Impacts at Construction MEI Locations - Uncontrolled

Emissions Year	Maximum Concentrations: Exhaust PM10/DPM ($\mu g/m^3$)	Maximum Concentrations: Fugitive PM2.5 ($\mu g/m^3$)	Cancer Risk (per million): Child	Cancer Risk (per million): Adult	Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu g/m^3$)
2025	0.1002	0.3627	**16.46**	**0.29**	**0.020**	**0.45**

Maximum Impacts at Construction MEI Locations - With Mitigation

Emissions Year	Maximum Concentrations: Exhaust PM10/DPM ($\mu g/m^3$)	Maximum Concentrations: Fugitive PM2.5 ($\mu g/m^3$)	Cancer Risk (per million): Child	Cancer Risk (per million): Adult	Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu g/m^3$)
2025	0.0269	0.1433	**4.41**	**0.07**	**0.005**	**0.16**

Cotati Village 2 - Cotati, CA - Uncontrolled Emissions
Maximum DPM Cancer Risk Calculations From Construction
Impacts at Off-Site Receptors- 1st Floor (1.5 meter receptor height)

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant/Child				Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 9**	**2 - 16**	**16 - 30**
Parameter					
ASF =	10	10	3	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	631	572	261
A =	1	1	1	1	1
EF =	350	350	350	350	350
AT =	70	70	70	70	70
FAH =	1.00	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information			Infant/Child	Adult - Exposure Information			Adult		
				DPM Conc (ug/m3)	Age	Cancer	Modeled		Age	Cancer		
Exposure Year	**Exposure Duration (years)**	**Age**	**Year**	**Annual**	**Sensitivity Factor**	**Risk (per million)**	**DPM Conc (ug/m3) Year**	**Annual**	**Sensitivity Factor**	**Risk (per million)**	**Fugitive PM2.5**	**Total PM2.5**
0	0.25	-0.25 - 0*		-	10	-	-	-	-	-		
1	1	0 - 1	2025	0.0853	10	14.00	2025	0.0853	1	0.24	0.3627	0.448
2	1	1 - 2		0.0000	10	0.00		0.0000	1	0.00		
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00		
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00		
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00		
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00		
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00		
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00		
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00		
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00		
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00		
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00		
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00		
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00		
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00		
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00		
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00		
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00		
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00		
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00		
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00		
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00		
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00		
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00		
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00		
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00		
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00		
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00		
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00		
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00		
Total Increased Cancer Risk						**14.00**				**0.24**		

* Third trimester of pregnancy

Cotati Village 2 - Cotati, CA - Mitigated Emissions
Maximum DPM Cancer Risk Calculations From Construction
Impacts at Off-Site Receptors- 1st Floor (1.5 meter receptor height)

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air ($\mu g/m^3$)
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant/Child				Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 9**	**2 - 16**	**16 - 30**
Parameter					
ASF =	10	10	3	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	631	572	261
A =	1	1	1	1	1
EF =	350	350	350	350	350
AT =	70	70	70	70	70
FAH =	1.00	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Locations

			Infant/Child - Exposure Information				Adult - Exposure Information					
				DPM Conc (ug/m3)	Age			Modeled DPM Conc (ug/m3)	Age			
Exposure Year	**Exposure Duration (years)**	**Age**	**Year**	**Annual**	**Sensitivity Factor**	**Infant/Child Cancer Risk (per million)**	**Year**	**Annual**	**Sensitivity Factor**	**Adult Cancer Risk (per million)**	**Fugitive PM2.5**	**Total PM2.5**
0	0.25	-0.25 - 0*		-	10	-	-	-	-	-		
1	1	0 - 1	2025	0.0210	10	3.44	2025	0.0210	1	0.06	0.1433	0.164
2	1	1 - 2		0.0000	10	0.00		0.0000	1	0.00		
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00		
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00		
5	1	4 - 5		0.0000	3	0.00		0.00000	1	0.00		
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00		
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00		
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00		
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00		
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00		
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00		
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00		
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00		
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00		
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00		
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00		
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00		
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00		
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00		
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00		
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00		
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00		
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00		
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00		
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00		
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00		
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00		
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00		
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00		
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00		
Total Increased Cancer Risk						**3.44**				**0.06**		

* Third trimester of pregnancy

Cotati Village 2 - Cotati, CA - Uncontrolled Emissions
Maximum DPM Cancer Risk Calculations From Construction
Impacts at Off-Site Receptors-2nd Floor (4.5 meter receptor height)

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air ($\mu g/m^3$)
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant/Child				Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 9**	**2 - 16**	**16 - 30**
Parameter					
ASF =	10	10	3	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	631	572	261
A =	1	1	1	1	1
EF =	350	350	350	350	350
AT =	70	70	70	70	70
FAH =	1.00	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information			Infant/Child	Adult - Exposure Information			Adult		
			DPM Conc (ug/m3)		Age	Cancer	Modeled DPM Conc (ug/m3)		Age	Cancer		
Exposure Year	**Exposure Duration (years)**	**Age**	**Year**	**Annual**	**Sensitivity Factor**	**Risk (per million)**	**Year**	**Annual**	**Sensitivity Factor**	**Risk (per million)**	**Fugitive PM2.5**	**Total PM2.5**
0	0.25	-0.25 - 0*		-	10	-	-	-	-	-		
1	1	0 - 1	2025	0.1002	10	16.46	2025	0.1002	1	0.29	0.2669	0.367
2	1	1 - 2		0.0000	10	0.00		0.0000	1	0.00		
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00		
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00		
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00		
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00		
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00		
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00		
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00		
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00		
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00		
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00		
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00		
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00		
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00		
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00		
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00		
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00		
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00		
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00		
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00		
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00		
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00		
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00		
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00		
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00		
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00		
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00		
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00		
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00		
Total Increased Cancer Risk						**16.46**				**0.29**		

* Third trimester of pregnancy

Cotati Village 2 - Cotati, CA - Mitigated Emissions
Maximum DPM Cancer Risk Calculations From Construction
Impacts at Off-Site Receptors-4.5 meter receptor height

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air ($\mu g/m^3$)
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant/Child				Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 9**	**2 - 16**	**16 - 30**
Parameter					
ASF =	10	10	3	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	631	572	261
A =	1	1	1	1	1
EF =	350	350	350	350	350
AT =	70	70	70	70	70
FAH =	1.00	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information			Infant/Child	Adult - Exposure Information			Adult		
							Modeled					
Exposure	**Exposure**		**DPM Conc (ug/m3)**		**Age**	**Cancer**	**DPM Conc (ug/m3)**		**Age**	**Cancer**	**Fugitive**	**Total**
Year	**Duration (years)**	**Age**	**Year**	**Annual**	**Sensitivity Factor**	**Risk (per million)**	**Year**	**Annual**	**Sensitivity Factor**	**Risk (per million)**	**PM2.5**	**PM2.5**
0	0.25	-0.25 - 0*		-	10	-	-	-	-	-		
1	1	0 - 1	2025	0.0269	10	4.41	2025	0.0247	1	0.07	0.1055	0.130
2	1	1 - 2		0.0000	10	0.00		0.0000	1	0.00		
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00		
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00		
5	1	4 - 5		0.00000	3	0.00		0.00000	1	0.00		
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00		
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00		
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00		
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00		
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00		
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00		
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00		
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00		
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00		
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00		
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00		
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00		
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00		
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00		
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00		
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00		
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00		
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00		
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00		
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00		
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00		
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00		
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00		
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00		
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00		
Total Increased Cancer Risk						**4.41**				**0.07**		

* Third trimester of pregnancy

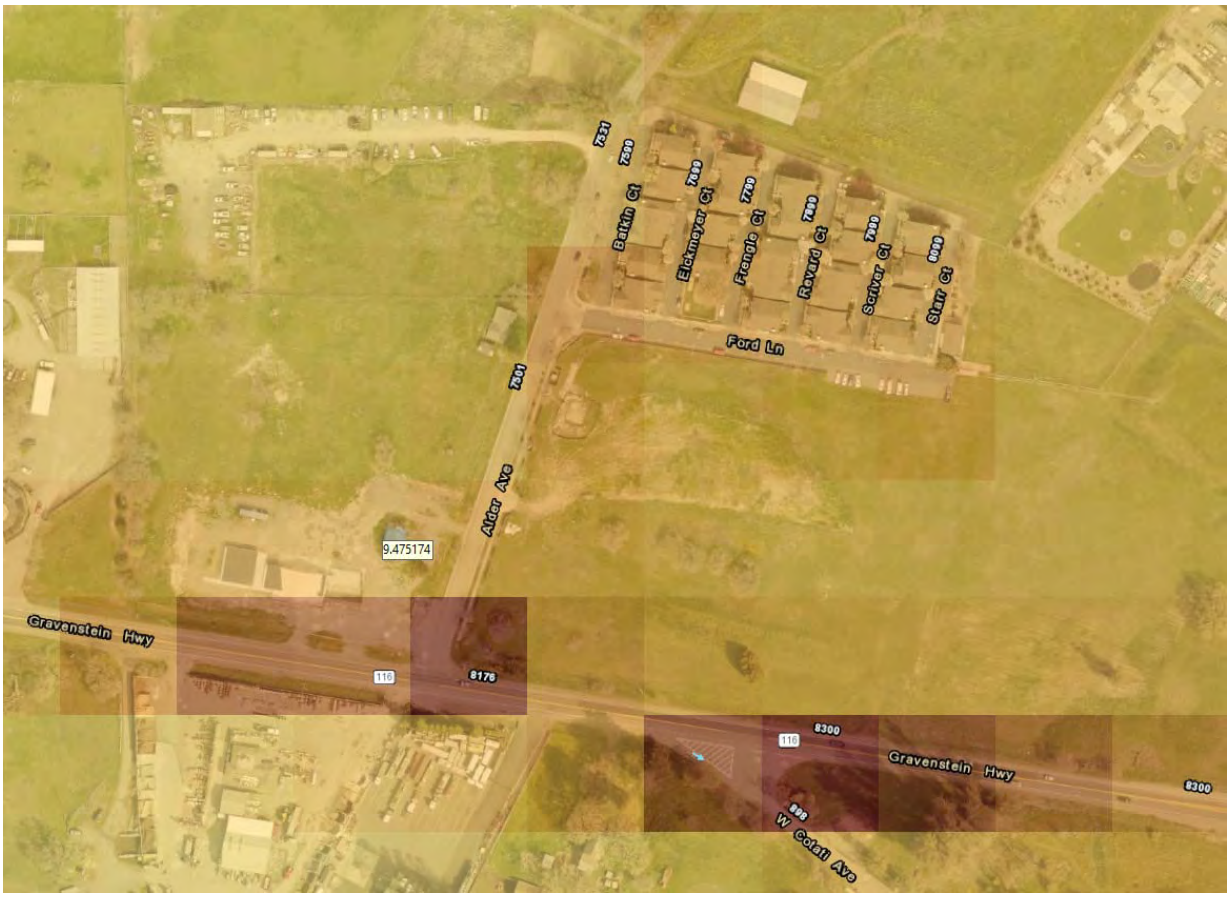
Attachment 3: Health Risk Screening Information and Calculations

BAAQMD RASTER Screening Data – Roadway Cancer Risk Impacts at the Cancer Risk MEI

BAAQMD RASTER Screening Data – Roadway $PM_{2.5}$ Concentration Impacts at the $PM_{2.5}$ MEI

BAAQMD RASTER Screening Data – Roadway Hazard Index Impacts at the Cancer Risk MEI

BAAQMD RASTER Screening Data – Roadway Cancer Risk Impacts at the Project Site



BAAQMD RASTER Screening Data – Roadway $PM_{2.5}$ Concentration Impacts at the Project Site

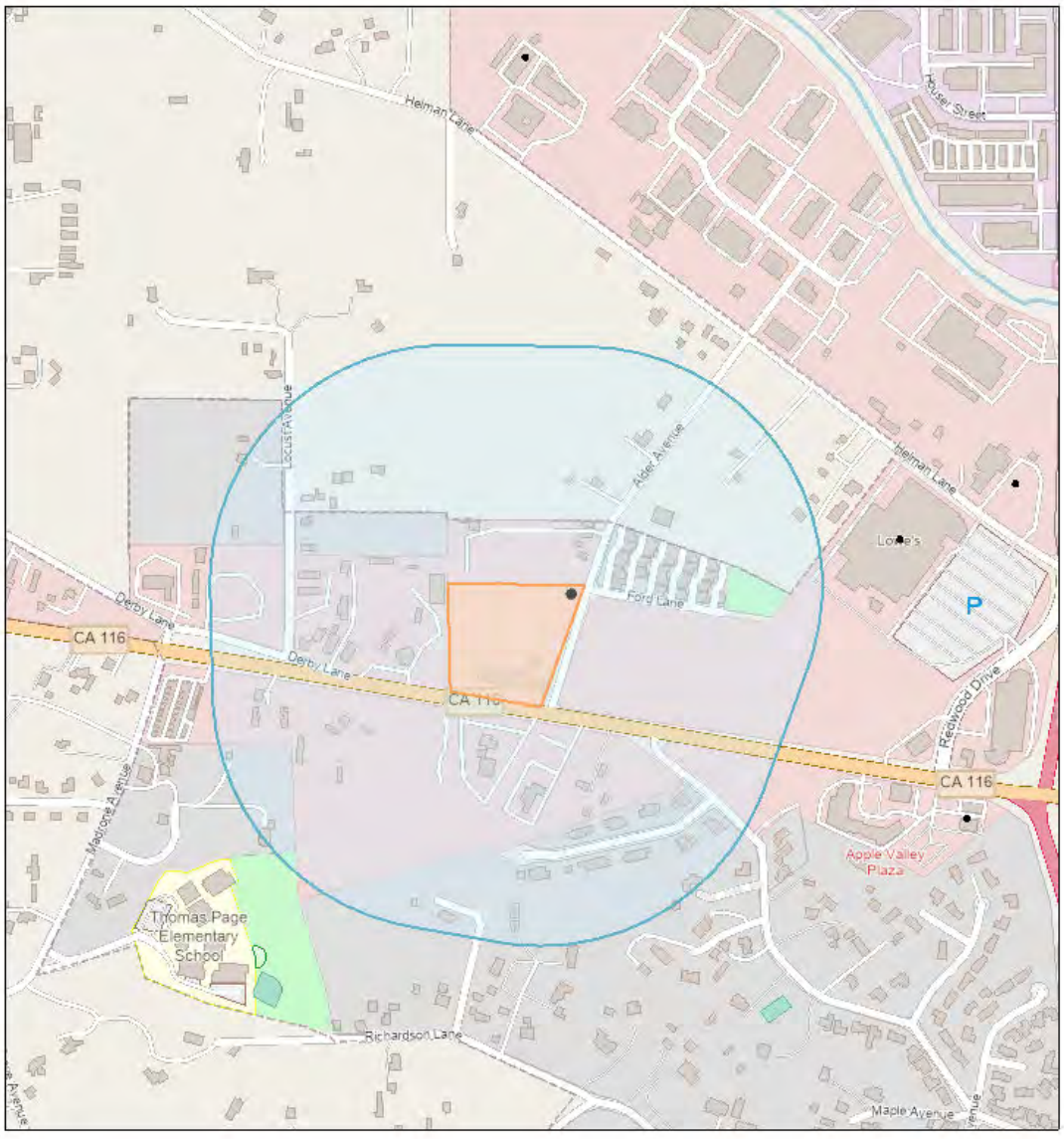
BAAQMD RASTER Screening Data – Roadway Hazard Index Impacts at the Project Site

Screening Report

Area of Interest (AOI) Information

Area : 5,325,516.41 ft²

May 17 2023 11:11:57 Pacific Daylight Time



Summary

Name	Count	Area(ft²)	Length(ft)
Permitted Stationary Sources	0	N/A	N/A

NOTE: A larger buffer than 1000 feet may be warranted depending on proximity to significant sources.